
ENVIRONMENTAL ASSESSMENT

OF THE DEMOLITION OF BUILDING 78 AND CONSTRUCTION OF NEW HAZARDOUS MATERIALS AND HAZARDOUS WASTE STORAGE BUILDINGS LOS ANGELES AIR FORCE BASE



Prepared for:

Los Angeles Air Force Base
483 N. Aviation
El Segundo, CA 90245-2808

Under Contract with:

Air Force Center for Environmental Excellence
311th Human Systems Wing/PKRBA
3300 Sidney Brooks
Brooks City Base, Texas 78235

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Prepared by:

MACTEC Engineering and Consulting, Inc.
200 Citadel Drive
Los Angeles, California 90040-1554

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Finding of No Significant Impact (FONSI)

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Background

The United States Air Force (Air Force) proposes to build two hazardous waste and hazardous materials storage Buildings. One of these buildings will be located at Los Angeles Air Force Base (LAAFB) and the other at Fort MacArthur. Included in this project is the demolition of Building 78 at Fort MacArthur, as it will be replaced by the new building.

In proposing the development of a new facility at LAAFB, the Air Force must comply with general procedural environmental review requirements under the *National Environmental Policy Act (NEPA) of 1969* (Public Law 91-190, 42 *United States Code* [USC] 4321 through 4337) and the *Council on Environmental Quality (CEQ) Regulations* (40 *Code of Federal Regulations* [CFR] 1500-1508) and the *Environmental Impact Analysis Process*, formerly known as Air Force Instruction [AFI] 32-7061 (32 CFR Part 989, et seq.).

Pursuant to these regulations, LAAFB (the 61st Civil Engineering Logistics Squadron, acting as the Lead Agency) prepared an Environmental Assessment (EA) to analyze the potential environmental consequences associated with the Proposed Action and alternatives in accordance with the requirements described above. The purpose of the EA is to provide information to Air Force decision makers regarding the potential environmental consequences of the Proposed Action, including the No Action Alternative. This EA serves as the environmental documentation in support of the decision makers' selection and approval of the Proposed Action or No Action Alternative.

This Finding of No Significant Impact (FONSI) summarizes the result of the evaluations of the Proposed Action.

Description of Proposed Action

Proposed Action at LAAFB: Hazardous wastes at LAAFB are currently stored in temporary, portable facilities located adjacent to the Physical Fitness Center on the parking lot. The Proposed Action involves construction of a permanent building for storage of hazardous wastes/materials, to be located north of the Physical Fitness Center near the recently demolished Building 212. After the proposed new building is constructed, the current hazardous waste/material storage sheds will be removed to an off-site location and disposed of in a manner consistent with applicable regulations.

Proposed Action at Fort MacArthur: Existing Building 78 will be demolished, removed, and a new slightly larger building will be built in its place with the primary function of providing a safe, permanent storage area for hazardous wastes and materials. These wastes and materials are currently stored just outside (east) of Building 78 in temporary metal sheds. These sheds will be removed after the new building is constructed and disposed of in a manner consistent with applicable regulations.

Need for Proposed Action

A summary of the drivers for the proposed action are as follows:

- Current storage units are inadequately sized (i.e., too small) for the installations, which presents storage space problems as well as safety and environmental concerns.

- Current storage units are deteriorating with visual corrosion in some of the units, which also presents safety and environmental concerns.
- Current units at LAAFB have been moved twice in the last three years to make way for other redevelopment activities. Moving units containing hazardous wastes/materials presents safety and environmental concerns.
- Temporary facilities are being used in place of permanent structures designed to best serve the purpose as well as to address safety and environmental issues.
- There are no other existing permanent buildings that have space, access, or design to accommodate storage of hazardous wastes/materials.

The proposed action would replace temporary, portable storage units with properly sized, permanent buildings in order to consolidate hazardous waste and hazardous materials storage into safe and permanent structures, thus resolving safety, environmental, and other issues. The new buildings will be constructed to code and designed with features for safely storing hazardous waste and hazardous materials including firewalls, fire sprinklers, sumps under the storage area, containment berms, and roll-up doors.

Project Alternatives

Various alternatives were considered as options to the Proposed Action, but none of them clearly offer the potential to reduce significant environmental impacts, and they do not conform to the NEPA requirements for feasibility (reasonableness); these and other additional alternatives considered unreasonable were removed from further analysis. The No Action Alternative also does not meet the criteria listed above, but is analyzed in this EA as required by NEPA. In this case, "no action" would mean that the proposed activity would not take place. The No Action Alternative includes the following:

- The temporary storage sheds currently used for hazardous waste/material storage will continue to be used.
- Building 78 at Fort MacArthur will not be demolished and will continue to be used for current functions.
- No new buildings will be constructed for hazardous waste/material storage.

This No Action Alternative will not resolve the storage problems of the current facilities. The existing storage will continue to be undersized. There will continue to be environmental and safety hazards by using the existing storage facilities.

The EA includes an analysis discussing the potential environmental effects from taking no action.

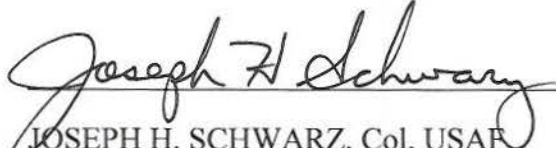
Potential Environmental Impacts

The EA, which is hereby incorporated by reference, assesses the environmental impacts associated with the Proposed Action and the No Project Alternative. The resources and environmental components assessed as part of this EA were comprehensive. The potential environmental effects associated with the Proposed Action and No Action Alternative were assessed for the following environmental resources: land use; aesthetics; cultural resources; socioeconomics; environmental justice; traffic; noise; air quality; hazardous materials and waste; safety and occupational health; topography, geology, soils, and natural hazards; water resources; biological resources; and infrastructure/utilities/public services. Cumulative effects resulting from the Proposed Action with other planned activities and other reasonably foreseeable

actions were also assessed. According to the analysis in the EA, implementation of the proposed action would not result in significant impacts to any resource category.

FINDING OF NO SIGNIFICANT IMPACT

The findings of the EA indicate that the Proposed Action will not have significant adverse effects on the human environment or any of the environmental resources as described in the Environmental Assessment. Accordingly, the requirements of NEPA, the regulations promulgated by the Council on Environmental Quality and 32 CFR 989 are fulfilled, issuance of a Finding of No Significant Impact (FONSI) is warranted, and an Environmental Impact Statement is not required. The signing of this Finding of No Significant Impact (FONSI) completes the Air Force's Environmental Impact Analysis Process.



JOSEPH H. SCHWARZ, Col, USAF
Commander

7 Jan 07
Date

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1.0 PURPOSE AND NEED FOR THE PROPOSED ACTION

1.1 Purpose of this Document

The United States Air Force (Air Force) proposes to build two hazardous waste and hazardous materials storage buildings at Los Angeles Air Force Base (LAAFB). One of these buildings will be located at LAAFB and the other at Fort MacArthur. Included in this project is the demolition of Building 78 at Fort MacArthur, as it will be replaced by the new building.

In proposing the development of a new facility at LAAFB, the Air Force must comply with general procedural environmental review requirements under the *National Environmental Policy Act* (NEPA) of 1969 (Public Law 91-190, 42 *United States Code* [USC] 4321 through 4337) and the *Council on Environmental Quality* (CEQ) *Regulations* (40 *Code of Federal Regulations* [CFR] 1500-1508) and the *Environmental Impact Analysis Process*, formerly known as Air Force Instruction [AFI] 32-7061 (32 CFR Part 989, et seq.).

This Environmental Assessment (EA) analyzes the potential environmental consequences associated with the Proposed Action and alternatives in accordance with the requirements described above. The purpose of this EA is to provide information to Air Force decision makers regarding the potential environmental consequences of the Proposed Action, including the No Action Alternative. This EA serves as the environmental documentation in support of the decision makers' selection and approval of the Proposed Action or No Action Alternative.

1.2 Background

LAAFB is houses the Space and Missile Systems Center (SMC), 61st Civil Engineering Logistics Squadron (CELS), and numerous Operating Locations and Detachments. The mission of LAAFB is to provide integrated affordable systems for the control and exploitation of air and space. The SMC is the center of technical excellence for the research, development, and purchase of military space systems, including on-orbit check-out, testing, sustainment, and maintenance of military satellite constellations and other Department of Defense (DoD) space systems.

LAAFB currently is comprised of five separate areas covering 249.7 acres in Los Angeles County, California. These areas are located within industrial, commercial, and residential portions of the county including one within the City of El Segundo (Areas B), and three within the San Pedro district of the City of Los Angeles (Fort MacArthur, Pacific Crest Housing Area, and Pacific Heights Housing Area). The Proposed Action takes place at LAAFB in El Segundo and Fort MacArthur in San Pedro. Maps showing the locations of LAAFB and Fort MacArthur are provided in Figures 1 - 3. Section 3.2 of this document provides a detailed description of the locations (LAAFB and Fort MacArthur) of the Proposed Action and a summary of the history, mission, and land use of the locations.

Hazardous wastes are generated and then stored in temporary units at each of these facilities (LAAFB and Fort MacArthur). The Proposed Action provides for the construction of permanent buildings for the safe storage of these wastes and other hazardous materials – one building at LAAFB and one at Fort MacArthur. The hazardous wastes generated at each facility are limited to automotive fluids, aerosol cans, refrigerants, waste paints, old batteries, and a few other household substances. LAAFB has developed and implemented an installation *Hazardous Waste Management*

Plan (HWMP; LAAFB, 2005b) that defines and establishes the hazardous waste management program on LAAFB; this plan was developed and is implemented by the LAAFB Environmental Engineering (61 CELS/CELEV) group.

One of LAAFB's goals is to design new, quality facilities that enhance mission effectiveness, protect the environment, and incorporate seismic safety measures as well as energy conservation technologies. Development of these hazardous waste/material storage buildings is consistent with these goals.

1.3 Purpose and Need for Proposed Action

Hazardous materials and hazardous waste at LAAFB are stored in temporary, portable metal storage sheds. Previously these temporary, portable hazardous waste facilities were stored next to the Old Gas Station (which was demolished in 2004 and was located near the Aviation Boulevard and 24th Street entrance). However, these portable storage units have been moved multiple times due to redevelopment activities, and now are currently in the northwest corner of the parking lot of the new Physical Fitness Center (Building 286). These storage units are too small, deteriorating, and generally do not meet the needs and objectives of LAAFB. The purpose of the Proposed Action is to construct a permanent, adequately sized, and safe building for hazardous wastes/materials storage. The proposed location is north of the Physical Fitness Center near the recently demolished Building 212 (see Figure 4).

Hazardous waste and hazardous materials at Fort MacArthur are stored in two temporary and portable metal storage units located just outside (east) of Building 78 (see Figure 5). These temporary storage units do not meet LAAFB's existing demands for waste storage. The units are deteriorating (e.g., corroding ceilings) and are too small for LAAFB's purposes. The base is not increasing the amount of waste generated; these units have always been undersized and too restrictive in space. Additionally, storage of hazardous materials in temporary units is not as environmentally and occupationally safe as storage in permanent structures. The current Building 78 is not a viable option as a location for the storage of hazardous wastes and materials due to the interior design and wood-frame nature of the building. Therefore, LAAFB proposes to demolish Building 78 and construct a new, slightly larger building in its place designed to adequately and safely store hazardous wastes and materials.

After the new buildings are constructed, the current hazardous waste/material storage sheds will be removed to an off-site location and disposed of in a manner consistent with applicable regulations.

In summary, the drivers for the proposed action are as follows:

- Current storage units are inadequately sized (i.e., too small) for the installations, which presents storage space problems as well as safety and environmental concerns.
- Current storage units are deteriorating with visual corrosion in some of the units, which also presents safety and environmental concerns.
- Current units at LAAFB have been moved twice in the last three years to make way for other redevelopment activities. Moving units containing hazardous wastes/materials presents safety and environmental concerns.

- Temporary facilities are being used in place of permanent structures designed to best serve the purpose as well as to address safety and environmental issues.
- There are no other existing permanent buildings that have space, access, or design to accommodate storage of hazardous wastes/materials.

The proposed action would replace temporary, portable storage units with properly sized, permanent buildings in order to consolidate hazardous waste and hazardous materials storage into safe and permanent structures, thus resolving safety, environmental, and other issues. The new buildings will be constructed to code and designed with features for safely storing hazardous waste and hazardous materials including firewalls, fire sprinklers, sumps under the storage area, containment berms, and roll-up doors.

1.4 Decision to Be Made

The decision to be made regarding the proposed action is whether:

- The Proposed Action has the potential to adversely affect the surrounding environment
- Further detailed analysis of the environmental issue areas, in the form of an Environmental Impact Statement (EIS), is needed to more accurately characterize the extent of the environmental impact associated with the Proposed Action
- To proceed with demolition of Building 78 at Fort MacArthur and construction of the new hazardous waste/material storage buildings at Fort MacArthur and LAAFB To take no action (i.e., No Action Alternative) and continue to rely on the existing temporary and portable storage units.

1.5 Environmental Impact Analysis Process

This document was prepared in accordance with the requirements of NEPA, CEQ *Regulations for Implementing the Procedural Provisions of NEPA*, and the *Environmental Impact Analysis Process (EIAP)*, formerly known as AFI 32-7061 (32 CFR 989, et seq.).

This EA examines the current conditions of the areas subject to the Proposed Action, evaluates the environments as they will be affected by the Proposed Action and alternatives, and compares those to conditions that might occur under the No Action Alternative. In accordance with 32 CFR 989, et seq., this EA

- Describes the existing environmental conditions as related to the Proposed Action
- Identifies and analyzes the potential environmental consequences of the Proposed Action, and the potential cumulative environmental impacts of the Proposed Action and alternatives
- Identifies mitigation measures, as appropriate, to avoid, limit, or reduce the potential environmental affects associated with the Proposed Action and alternatives
- Identifies applicable environmental permits, if any, required for the Proposed Action.

Preparation of this EA followed the EIAP. The actions involved in the EIAP are outlined below

1. Conduct intergovernmental and interagency coordination of environmental planning (IICEP). Executive Order (EO) 12372, *Intergovernmental Review of Federal Programs*, requires intergovernmental notifications before making a detailed statement of environmental impacts. The IICEP requires comments to be solicited from the public in the region local to the proposed action. The items below indicate how comments will be solicited from government agencies and the public to help ensure their concerns and issues about the Proposed Action are included in the analysis.
2. Prepare a Draft EA. The first comprehensive document for public and agency review is the Draft EA. This document examines the environmental impacts of the Proposed Action, including the No Action Alternative.
3. Announce that the Draft EA and Draft Finding of No Significant Impact (FONSI) have been prepared. An advertisement is posted, in a newspaper local to the proposed action, notifying the public as to the Draft EA's availability for review in a local library. After the Draft EA is distributed, a 30-day public comment period begins. The public was notified of the document's availability through an advertisement in the *El Segundo Herald* (June 1, 2006) and in the *Daily Breeze* newspaper (May 31, 2006). Copies of the document were placed in the El Segundo and San Pedro public libraries. A Notice of Completion was sent (May 25, 2006) to the California State Clearinghouse for distribution to state agencies.
4. Provide a public comment period. The goal during this process is to solicit comments concerning the analysis presented in the Draft EA. A 30-day public comment period ran from June 1 to June 30, 2006.
5. Prepare a Final EA and FONSI. Following the public comment period, a Final EA is prepared. This document is a revision (if necessary) of the Draft EA, includes consideration of public comments, and provides the decision-maker with a comprehensive review of the proposed action and the potential environmental impacts.

1.6 Other Regulatory and Permit Requirements

This EA has been prepared in compliance with NEPA and other federal statutes, such as the Clean Air Act (CAA); the Clean Water Act; Endangered Species Act; Comprehensive Environmental Response, Compensation, and Liability Act; Resource Conservation and Recovery Act (RCRA); Occupational Safety and Health Act; the National Historic Preservation Act (NHPA); Executive Orders; and other applicable statutes and regulations. The Air Force will also acquire the appropriate construction and operation permits.

The preservation of cultural resources falls under the purview of the State Historic Preservation Office (SHPO), as mandated by the NHPA (16 USC §470 et seq.) and its implementing regulations. A Section 106 consultation package is being prepared by the Air Force for submittal to the California SHPO informing them of the Proposed Action.

1.7 Organization of the Environmental Assessment

The remainder of this EA is organized in the following chapter format:

Chapter 2.0: Description of the Proposed Action and Alternatives

Chapter 3.0: Affected Environment

Chapter 4.0: Environmental Consequences

Chapter 5.0: References

Chapter 6.0: List of Preparers

2.0 DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

2.1 Introduction

The Air Force proposes to construct new hazardous waste and materials storage buildings at LAAFB and Fort MacArthur of LAAFB, California. The proposed action analyzed in this EA involves replacing the existing temporary, portable hazardous waste and hazardous materials storage sheds at LAAFB with a new, permanent, hazardous waste and hazardous materials storage building. The proposed action analyzed also involves replacing Building 78 and the current temporary, portable hazardous waste and hazardous materials storage containers behind Building 78 at Fort MacArthur with a new, permanent hazardous waste and hazardous materials storage building. This chapter describes this proposed action in more detail. In conformance with CEQ regulations (40 CFR 1502.1(d)), this EA also analyzes the No Action Alternative. Under the No Action Alternative, the Air Force would not construct new hazardous waste/material storage facilities at LAAFB at this time.

2.2 Identification of Alternatives Eliminated from Further Consideration

NEPA regulations (40 CFR § 1502.14) emphasize the selection of a range of reasonable alternatives and the adequate assessment of these alternatives to allow for a comparative analysis for consideration by decision-makers.

Several alternatives were assessed for their potential to reasonably achieve project objectives and reduce potential environmental impacts of the proposed action. Also, their technical and regulatory feasibility was evaluated to assess whether the alternatives would be feasible and reasonable. Identification of alternatives to the proposed action involved reviewing the requirements of LAAFB as well as the purpose and need for the proposed action. Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and from using common sense. The following criteria for screening alternatives were developed:

1. Provides adequate storage space?
2. Provides safe storage of hazardous wastes and materials?
3. Convenient location and access?
4. Aesthetically pleasing (visually)?
5. Location will not interfere with other functions?
6. Minimal impact to cultural resources at Fort MacArthur?
7. Minimal construction disturbance?
8. Fewer potential environmental impacts than the proposed action?
9. Provides permanent location/building for storage?

Based on these screening criteria and evaluation of the alternatives for reasonableness, the alternatives listed below were eliminated from further consideration. The following discussions describe these potential alternatives and the basis for their elimination.

Upgrade the Existing Storage Facilities. The current facilities are in a deteriorated condition. This alternative offers improvements and upgrades for the existing storage facilities. However, the existing storage facilities are significantly undersized. This alternative was eliminated because it would not meet the criteria numbers 1, 2, 4, and 8.

Replace the Existing Temporary Storage Units with New Temporary Units. This alternative would not meet the criteria numbers 1, 2, 4, and 9. This is also not cost-effective and does not solve the issues discussed in the Purpose and Need for Proposed Action (Section 1.3).

Use an Existing Building. This alternative offers replacement of the temporary storage with an existing permanent structure/building at LAAFB and Fort MacArthur instead of constructing new ones. There are no existing structures at LAAFB and Fort MacArthur that can provide storage of hazardous waste and materials; the alternative does not meet the criteria numbers 1, 2, 3, 5, 6, and 8.

Construct in Alternative Locations. Alternative locations for placement of new hazardous waste/material storage buildings at LAAFB and Fort MacArthur were considered during the formulation of alternatives. These alternative locations were ruled out due no other location meeting the criteria listed above, particularly criteria numbers 1, 3, 5, 6, 7, and 8.

The alternatives listed above do not clearly offer the potential to reduce significant environmental impacts, and they do not conform to the NEPA requirements for feasibility (reasonableness); these and other additional alternatives considered unreasonable were removed from further analysis.

The No Action Alternative also does not meet the criteria listed above, but is analyzed in this EA as required by NEPA. The No Action Alternative is described in Section 2.4.

2.3 Detailed Description of the Proposed Action

2.3.1 Location of Proposed Action

As stated in Section 1.1 and 1.2, the Proposed Action will occur within the boundaries of LAAFB's in the City of El Segundo and at Fort MacArthur in the City of San Pedro. See Section 3.2 of this document for a detailed description of these locations and a summary of the history, mission, and land use of the locations.

2.3.2 Proposed Action at Los Angeles Air force Base

Hazardous wastes at LAAFB are currently stored in temporary, portable facilities located adjacent to the Physical Fitness Center on the parking lot. The Proposed Action involves construction of a permanent building for storage of hazardous wastes/materials, to be located north of the Physical Fitness Center near the recently demolished Building 212. After the proposed new building is constructed, the current hazardous waste/material storage sheds will be removed to an off-site location and disposed of in a manner consistent with applicable regulations. See Section 1.3 for more information on the existing storage facilities and the proposed location for the new building.

2.3.3 Proposed Action at Fort MacArthur

The existing Building 78 will be demolished, removed, and a new slightly larger building will be built in its place with the primary function of providing a safe, permanent storage area for hazardous wastes and materials. These wastes and materials are currently stored just outside (east) of Building 78 in temporary metal sheds. These sheds will be removed after the new building is constructed and disposed of in a manner consistent with applicable regulations. See Section 1.3 for more information on the existing storage facilities.

2.3.4 Description of Proposed Buildings

Similar building plans and designs will be utilized for constructing the new buildings at Fort MacArthur and LAAFB. In addition to storing hazardous waste and materials, the buildings will also contain office space for two or three offices, non-hazardous waste and material storage, empty drum storage, a packaging area, equipment storage, restrooms, and a lunch room. Although the buildings were still in the design phase at the time this EA was prepared, the Air Force will design and construct the buildings in compliance with Air Force architectural and interior design standards and ensure compatibility with surrounding buildings. The buildings will be designed consistent with the existing LAAFB architectural context, and will maintain an exterior metal-panel system. Some of the features of the buildings are listed below.

- Floor space: 2,500 square feet
- For subsurface construction work, the existing pavement at both sites will be cut up, removed, and replaced with a concrete foundation, with excavation to about 3 feet.
- Single story construction.
- Constructed of split-face concrete masonry wall units, metal siding, and concrete floor slab.
- The new buildings are designed to contain fire with spill prevention and response features, including firewalls, fire sprinklers, sumps under the storage area, containment berms, and roll-up doors.
- The new buildings will incorporate seismic safety measures to meet current applicable building codes.
- Landscaping, if any, would be limited to small functional areas around entrances, and will consist of low maintenance, drought tolerant native species.
- Utilities will be connected to existing electric, water, and domestic sewage systems currently available.
- The facility specifications will include the most current and modern facility equipment items to ensure maximum environmental compliance, efficiency, and effectiveness.
- Design and construction will be state-of-the-art engineering and safety standards to ensure compliance with all existing and anticipated environmental and safety regulations and procedures.

- Design and construction will conform to the criteria in and technical guidance of Engineering Technical Letter 98-7, Military Handbook 1008C, and the Uniform Building Code.
- Heating, ventilation, and air-conditioning systems will be installed in accordance with the American Society of Heating, Refrigeration, and Air-Conditioning Engineers standards.
- Hazardous waste and hazardous materials will be stored within a concrete bermed area that provides secondary containment. There will be no floor drains within the storage area.
- All associated components will be constructed in conformance with Occupational Safety and Health Administration (OSHA) workplace noise, air quality, and safety regulations.
- Before demolition of Building 78, the building will be surveyed for asbestos, lead-based paint, and polychlorinated biphenyls (PCBs). If such materials are present, they will be properly removed using standard abatement and containment procedures.
- Before any site work, a project-specific subsurface soil/geotechnical investigation will be performed at both sites to determine the presence of methane underlying the project site. This investigation will determine whether the methane is of a hazardous concentration and whether installation of a passive methane gas control system or other measures are needed to vent methane to prevent it from accumulating beneath the building and inside the building. As appropriate, methane control methods as specified in the Los Angeles Department of Building and Safety, Methane Mitigation Standard would be implemented to reduce methane impacts to less than significant.

2.3.5 Construction Schedule

LAAFB

- Construction Period of New Building: During 2008
- Construction Complete: By September 2008
- Removal of Old Storage Facilities: September 2008

Fort MacArthur:

- Demolition of Building 78: During 2007 or 2008
- Construction Period of New Building: During 2008
- Construction Complete: September 2008
- Removal of Old Storage Facilities: September 2008

2.3.6 Construction Scenario

The Proposed Action would be constructed over a period of six months. It is estimated that up to a maximum of 15 construction workers will be on-site on any given day during construction of each building.

It is assumed that construction of each building will involve the operation of the following heavy equipment:

- One backhoe
- One bulldozer
- One small dump truck to haul off cut up pavement and building materials from Building 78
- One small hydraulic crane
- Two concrete mixers.

The duration of operation of each of these pieces of equipment would vary and range from one week to five weeks. Not all of the equipment will be on site at any one time.

The anticipated duration of construction activities is as follows:

- Demolition of Building 78 at Fort MacArthur: 3 weeks
- Site preparation (asphalt cutting, removal, and replacement with a concrete foundation): 4 weeks
- Construction of the new building: 3 months

For LAAFB, the anticipated construction route would utilize El Segundo Boulevard off Interstate 405 (I-405) to Douglas Street to enter and exit through an access gate just west of the project site on Douglas Street traveling north to Imperial Highway and/or I-105. For Fort MacArthur, the anticipated construction route would utilize the main gate off of Pacific Avenue.

During construction, at Fort MacArthur, the existing storage sheds will continue to be used; however, they will be moved away from their current location so as not to interfere with the demolition of Building 78 and the construction of the new building.

2.3.7 Measures Incorporated in the Proposed Action to Reduce Environmental Impacts

In accordance with 32 CFR 989.22, the Air Force must indicate if any mitigation measures would be needed to implement the Proposed Action, or any alternative selected as the preferred alternative, under this EA. For purposes of this EA, no mitigation measures are proposed to arrive at a FONSI if the proposed action were implemented. However, some standard operating procedures have been incorporated into the Proposed Action to help minimize or eliminate any environmental effects. These are as follows:

- No tracked vehicles will be used during construction
- No earthen berms will be constructed
- Vehicle and equipment engine idling shall be limited to the extent feasible during construction
- Upon discovery of archeological or cultural artifacts, all field work will stop and an archaeologist will be required to assess the site for further action
- The building at Fort MacArthur that will replace Building 78 will be designed with the same general architecture and color as the existing and surrounding buildings
- Before any site work, a project-specific subsurface soil/geotechnical investigation will be performed at both sites to determine the presence of methane underlying the project site. This investigation will determine whether the methane is of a hazardous concentration and whether installation of a passive methane gas control system or other measures are needed to vent methane to prevent it from accumulating beneath the building and inside the building. As appropriate, methane control methods as specified in the Los Angeles Department of Building and Safety, Methane Mitigation Standard would be implemented to reduce methane impacts to less than significant.

2.3.8 Operations

The new facilities will have the same type of operations, number of employees, and hours of operation as the existing facilities. As further explained in Section 4.6, there will be no increase in traffic and no change in traffic patterns as a result of the Proposed Action.

2.4 Description of the No Action Alternative

The NEPA regulation at 40 CFR Section 1502.14(d) requires that "the alternative of no action" be considered. In this case, "no action" would mean that the proposed activity would not take place. The No Action Alternative includes the following:

- The temporary storage sheds currently used for hazardous waste/material storage will continue to be used.
- Building 78 at Fort MacArthur will not be demolished and will continue to be used for current functions.
- No new buildings will be constructed for hazardous waste/material storage.

This alternative will not resolve the storage problems of the current facilities. The existing storage will continue to be undersized. There will continue to be environmental and safety hazards by using the existing storage facilities.

This EA includes an analysis discussing the potential environmental effects from taking no action.

3.0 AFFECTED ENVIRONMENT

3.1 Introduction

The Air Force proposes to construct new hazardous waste and materials storage buildings at LAAFB and Fort MacArthur of LAAFB, California. To provide a baseline against which potential impacts related to the proposed action can be assessed, the existing general environmental conditions at LAAFB and Fort MacArthur are described. The environmental components addressed include relevant natural or human environments that can potentially be affected by the proposed action and alternative. The information for much of this chapter was obtained from documentation provided by LAAFB staff and obtained from various sources on the internet, and supplemented with observations during a site visit.

3.2 Location and General Site Descriptions

LAAFB currently is comprised of Four separate areas covering 208.2 acres in Los Angeles County, California. These areas are located within industrial, commercial, and residential portions of the county including one within the City of El Segundo (LAAFB), and three within the San Pedro district of the City of Los Angeles (Fort MacArthur, Pacific Crest Housing Area, and Pacific Heights Housing Area). Table 3-1 below summarizes the names and acreage of these areas. Figures 1 – 3 show the regional location of these facilities.

Table 3-1. Acreages of Areas on Los Angeles Air Force Base

Area	Acres
LAAFB	53.7
Fort MacArthur	96.0
Pacific Crest Housing Area	22.0
Pacific Heights Housing Area	36.4
TOTAL NUMBER OF ACRES	208.2

As the proposed action will only take place at Area B and Fort MacArthur, only these two areas will be discussed in this chapter.

Los Angeles Air Force Base (LAAFB)

LAAFB is an industrial/office complex located in the City of El Segundo, California, about four miles south of Los Angeles International Airport (LAX), in an area dominated by aerospace industries. It is located at the northwest corner of El Segundo Boulevard and Aviation Boulevard in El Segundo, California. LAAFB is bounded on the south by El Segundo Boulevard, the east by Aviation Boulevard, the west by Douglas Street, and the north by a Northrup Grumman facility. Figures 2 and 4 depict the location of LAAFB.

Historically, LAAFB has consisted of about 30 buildings and parking areas. However, LAAFB is undergoing major construction activities, particularly in Area B, and several buildings have been demolished within the past ten years. The installation master plan calls for construction of several new buildings in Area B to house the offices previously located in Area A. During the course of the construction activities, to meet various requirements, there have been, and will be, frequent modifications made to the construction and design of the new buildings in Area B.

Currently, Area B is used to provide logistic, administrative, transportation, and medical support for all organizations and personnel assigned or affiliated with the installation. It includes administrative offices, engineering offices, a medical dental clinic, commissary, Physical Fitness Center, Auto Skills Center, and Army and Air Force Exchange Service (AAFES) base exchange. The surrounding properties include residential, retail/commercial, and light industrial uses. An aerospace manufacturer, Northrop Grumman, occupies the adjacent property to the north of Area B. Residential land, Aerospace Corporation, an Entenmann's Bakery Outlet, and Lockheed Martin & Nichols Research occupy the adjacent properties to the east. The Aerospace Corporation is also adjacent to Area B's southern property boundary. MSAS Global Logistics, Candle, and Rockwell International, Inc. occupy the adjacent properties to the west of Area B.

Fort MacArthur

Fort MacArthur is located at 2400 Pacific Avenue in San Pedro, California, approximately 20 miles south of LAAFB. Fort MacArthur is bordered by Shoshonean Road and 22nd Street on the north, Stephen M. White Dr. on the south, Pacific Avenue on the west, and Via Cabrillo Marina on the east. Los Angeles Harbor lies immediately to the east of Shoshonean Road and Via Cabrillo Marina. Figures 3 and 5 depict the location of Fort MacArthur.

Fort MacArthur consists of 404 military family housing buildings and 38 buildings that are used for maintenance, storage, medical, administrative, and community purposes. Generally, Fort MacArthur provides military family housing and various employment and community support activities for LAAFB. In addition to housing and administrative buildings, there are buildings for a child care center, chapel, gymnasium, clinic, shopping facilities, maintenance shops, and storage areas. Fort MacArthur is also home to a large, open historic parade ground.

Residences occupy the adjacent properties to the north of Fort MacArthur. The Pacific Ocean and a marina are located to the east. Fort MacArthur is bounded on the west side by Pacific Avenue, which includes a mixture of residential and commercial properties such as a laundromat, a market, and a hauler (Cleanup Masters) near the corner of 28th Street; a market and an abandoned service station near the corner of 34th Street; and a commercial facility of unknown use near the corner of 30th Street. The southern side of Fort MacArthur is bounded by Stephen M. White Drive with a mix of residential and commercial properties including apartments, a realty office (Shorewood Realtors), and an aquarium.

3.3 History and Mission of LAAFB

History of LAAFB

LAAFB was established in 1954 at Inglewood, California, five miles north of the present location of Area B. Originally known as the Western Development Division of the Air Research and Development Command, the facility was moved to El Segundo in 1960, and renamed Los Angeles Air Force Station (LAAFS) in 1964. In 1967, LAAFS was designated as headquarters for Space and

Missile Systems Organization. By the early 1970s, LAAFS's primary mission was the development of the Atlas and Titan missile and satellite programs. DoD involvement in National Aeronautics and Space Administration (NASA) operations was also headquartered at LAAFS. This included prime responsibility for the Inertial Upper Stage booster for the Space Shuttle. LAAFS was renamed LAAFB in 1989.

Before World War II, the region that includes LAAFB Area B and was used primarily for agriculture and oil exploration and production. During the war Area B was developed for military aircraft production by the Douglas Aircraft Company (U.S. Air Force 1995, 1997). Area B was acquired by the U.S. Navy in 1942 and used as a Naval Weapons Industrial Reserve Plant. In 1963, the U.S. Navy transferred 52.3 acres of what is now Area B to the Air Force. In 1968, the Air Force added another 1.4 acres to the area, and the parcel was officially designated as Area B (as reported in Tetra Tech, 2001).

Fort MacArthur has a long history of military use dating back to 1888 when a 50-acre parcel described as "500 Varas Square" was reserved from public domain as a military reservation. The reservation was designated Fort MacArthur in 1914, and construction work began on a harbor defense. Fort MacArthur was originally established in the 1910s and 1920s to defend the Port of Los Angeles. In 1982, Fort MacArthur was transferred to the Air Force from the U.S. Army. In 1985, the Air Force acquired two additional parcels from the City of Los Angeles, and a third was transferred from the Navy a few years later. The first two areas, known collectively as the Pacific Heights Housing Area, and the third, Pacific Crest Housing Area, are located on land historically used for cattle grazing and farming.

Military Mission of LAAFB

The mission of the LAAFB is to provide integrated, affordable systems for the control and exploitation of air and space. The installation is home to the SMC, 61st ABG, and numerous operating locations and detachments. SMC is the center of technical excellence for the research, development, and purchase of military space systems, including on-orbit checkout, testing, sustainment and maintenance of military satellite constellations, and other DoD space systems. These systems include communication, navigation, and meteorological satellites; launch vehicles; and the DoD elements of the Space Transportation System. The Aerospace Corporation, located adjacent to LAAFB, is a federally funded research center with the mission of aiding the Air Force in applying science and technology to national security issues.

In support of this mission, LAAFB maintains three military housing areas, a medical clinic, administrative offices, and other maintenance organizations. Space and missile systems research and development take place at Areas A and B in El Segundo, California, while the nearby Lawndale Annex provides administrative facilities. Fort MacArthur is primarily a residential and social support facility. The Pacific Crest and Pacific Heights Housing Areas are used exclusively for military housing.

LAAFB currently employs approximately 3,400 government workers and manages approximately \$8.5 billion in federal contracts. Most of this amount encompasses work performed by large and small firms located in El Segundo, Hawthorne, Manhattan Beach, and surrounding communities.

3.4 Land Use

Area B consists of about 30 buildings and is currently used to provide logistic, administrative,

transportation, and medical support for all organizations and personnel assigned to or affiliated with the installation. Support facilities at Area B include recreation facilities, administrative offices, industrial shops, and several parking areas. Area B also contains the base commissary and exchange, which are patronized by LAAFB personnel, as well as by other military personnel and retirees in the area. The areas adjacent to LAAFB properties include highly developed commercial, industrial, and residential land uses. Area B is primarily surrounded by industrial uses to the south, and mixed office and commercial uses to the west, north, and east. A residential area (Holly Glenn area) is located east of Area B. LAX is located approximately four miles north of the LAAFB. Properties surrounding Area B primarily house aerospace and light industry, as well as regional transportation facilities. Area B is adjacent to existing freight railroad lines, which run along Aviation Boulevard and the eastern boundary of Area B.

Fort MacArthur consists of 404 housing units, recreational facilities, a historic parade ground maintained as a large open lawn area, warehouses and storage facilities, group quarters, engineering shops, a mess, a communications facility, and administrative offices. To the west, Fort MacArthur is bordered by the West Channel/Cabrillo Beach recreational complex and the Los Angeles Harbor. Primarily mixed single and multi-family dwellings, along with some commercial properties, surround the rest of Fort MacArthur.

California Government Code Section 65100 requires each city and county have a planning agency to develop a general plan and regulations for the land use and development permitted within its boundaries. Proposed developments are evaluated based on their conformity and consistency with such plans and the adopted policies contained within the plans. The City of El Segundo General Plan, Land Use Map, and Zoning Map (City of El Segundo, 1992) place restrictions on the type and scope of development that can occur in various parts of the city. The General Plan identifies the LAAFB as government property with expected use to remain similar to current use for the life of the plan. Area B of the LAAFB is specifically zoned as Public Facility (P-F), which permits community facilities of a public or quasi-public nature. These include governmental buildings (e.g., libraries and fire stations), schools and administrative offices, flood control facilities, public parking structures, public utilities, and public recreational facilities. The existing uses in Area B are consistent with this zoning. However, because Area B is under federal jurisdiction, uses in that area are not required to conform to this zoning designation.

Fort MacArthur is within the San Pedro Specific Plan Area of the City of Los Angeles (City of Los Angeles Planning Department, 2003). It is zoned as Public Facilities, or PF-1XL, similar to Area B. As with Area B, the existing uses within Fort MacArthur are consistent with this zoning. Fort MacArthur lies just south of the Pacific Corridor Redevelopment Project. The Pacific Corridor Project Area contains approximately 693 acres, and is bounded by 22nd Street on the south, which is the northern border of Fort MacArthur. The Pacific Corridor Project Area, overshadowed by the bustling activities of the Port of Los Angeles, has been declining for several years subject to physical deterioration, economic stagnation, and social decay. The Redevelopment Plan for this area was adopted by the Los Angeles City Council in 2002 (City of Los Angeles Community Redevelopment Agency, 2005). Key plan goals and objectives are to maintain downtown San Pedro and the surrounding area as an aesthetically pleasing community reflecting its past and reinforcing its status as an international port city with waterfront access; to assure a crime free and drug free community; to promote tourism related activities that enhance economic and recreational opportunities in the community; to develop a variety of consumer retail shopping and entertainment opportunities and, by the same token, to discourage commercial activities perceived to have a detrimental effect on the community; and to preserve the unique cultural, social and physical from economic blighting conditions. (Information on the Pacific Corridor Redevelopment Project from <http://www.lacity.org/CRA/>, July 2005).

3.5 Cultural Resources

The LAAFB has prepared a Integrated Cultural Resources Management Plan (ICRMP; Chandler et al., 2004 (***)Revise this date is incorrect – it is 2004 – also change reference section 5.0)) specific to the base that directs and guides the documenting and managing of known cultural resources on its properties. LAAFB includes Four parcels of land, one in El Segundo, and three of in San Pedro, California. While the ICRMP is designed for the entire base, only two of the parcels contain known cultural resources at present. These are the Pacific Heights Housing Area and Fort MacArthur. The areas of interest for the Proposed Action are LAAFB in El Segundo and Fort MacArthur in San Pedro. At present, staff from the 61 CELS/CELEV Environmental Engineering, implements the ICRMP on behalf of LAAFB.

3.5.1 Archaeological Sites

No archaeological sites are known to exist on LAAFB or Fort MacArthur. While an archaeological survey has never been conducted on LAAFB, one was conducted at Fort MacArthur in 1979 (Chandler et al., 2004). No archaeological sites were found at that time. Prehistoric and historic archaeological sites have been recorded in the region, so it is possible that subsurface remains exist on the properties.

3.5.2 Historic Structures

According to the ICRMP (Chandler et al., 2004), LAAFB has been inventoried and evaluated for historic-age buildings (i.e., buildings at least 50 years old or older) in recent years. LAAFB includes two buildings that qualify as historic, but are not eligible for nomination to the National Register of Historic Places (NRHP).

Fort MacArthur contains a National Register of Historic Places (NRHP) listed Historic District consisting of 35 buildings and objects clustered around the historic parade ground and plaza. The components of the district date to the early twentieth century. The district is known as the 500 Varas Square Historic District, and it has been listed since 1986 (Chandler et al., 2004). In 2001, six buildings and two objects (the fountain and monument) were evaluated and recommended as eligible, contributing elements to the 500 Varas Square NRHP listed Historic District. They are Buildings 14, 15, 16, 17, 18, and 19, and Facilities 148 and 167. A California Historical Landmark stands within the 500 Varas Square District, which is known as the 100 Varas Tract and includes the site of a small adobe building built in 1823 by two English traders. The adobe was the first permanent building constructed in the local area (Chandler et al., 2004).

One additional property – the American Trona Plant – is listed on the NRHP, but as an individual property, not as part of the 500 Varas Square District. It also dates to the early twentieth century.

Fifteen other buildings and two objects were evaluated in 2001 at Fort MacArthur and recommended as not eligible for nomination to the NRHP. Among these is Building 78, a former wagon shed dating to 1918 (Chandler et al., 2001). Though it could be considered a historic building, it is considered “not eligible” to the NRHP because it lacks a strong association with significant people or events in history, does not possess exceptional architectural attributes, and lacks much of its integrity in terms of design, workmanship, feeling, and materials. It also is not a contributing element to the existing 500 Varas Square National Register District.

3.6 Socioeconomics and Environmental Justice

Socioeconomic assessment focuses on the general features of the local economy that could be affected by the proposed action or alternative. Environmental justice addresses the disproportionately high and adverse human health or environmental effects on minority and low-income populations.

3.6.1 Demographic Information

Socioeconomic and demographic information for the areas including and surrounding LAAFB (El Segundo) and Fort MacArthur (San Pedro) are provided below. Census data were collected from the U.S. Census Bureau FactFinder (<http://factfinder.census.gov/>) for El Segundo's zip code (90245) and for the primary zip code for the San Pedro community (90731). This primary zip code for San Pedro includes the eastern 80 percent of the San Pedro community land area and the western portion of Los Angeles Harbor.

	El Segundo	San Pedro
Population	16,033	58,622
Median Family Income	\$61,341	\$39,057
Per capita income	\$33,996	\$18,043
Percent of Individuals Living Below Poverty Level	4.6	20.5
Non-Caucasian Minority Population (Percentage)	24.9	41.3

Source: 2000 census data from the U.S. Census Bureau FactFinder, July 2005

El Segundo has a considerably large daytime employee population of approximately 80,000, with most employed by the aerospace and electronics industries. The City of El Segundo reports 35,580 workers employed by its top 25 private employers. LAAFB personnel represent approximately 10 percent of the workforce in El Segundo. LAAFB provides about 1,123 military jobs, 3,281 civilian jobs (1,081 SMC civilian jobs and 2,200 Aerospace Corporation jobs), and supports approximately 40,000 military retirees.

Historically, the local economy in the El Segundo area has been dominated by aerospace and defense firms, and other high-technology industries. In recent years, other major port-related manufacturing and non-manufacturing employers have located in the area. Today, the area houses numerous regional, national, and international headquarters and also supports a variety of industrial-, retail-, and office-based businesses.

For El Segundo, the percentage of residents below the poverty level is lower than that of the City of Los Angeles (17.9) and the State of California (14.2). However, for San Pedro residents, it is higher. The percentages of minority residents in both El Segundo and San Pedro are lower than the Los Angeles (51.3 percent). The percentage of minority residents in El Segundo is lower than the State of California (40.5 percent). For the San Pedro area it is about the same.

3.6.2 Environmental Justice

Environmental justice addresses the disproportionately high and adverse human health or environmental effects on minority and low-income populations. Determination of disproportionately high and adverse human health effects are established by identifying the impact on the natural or physical environment and influence on minority and low-income populations.

EO 12898, *Federal Actions to Address Environmental Justice in Minority Populations and Low Income Populations*, was issued on February 11, 1994. Objectives of the EO, as it pertains to this EA, include development of federal agency implementation strategies, identification of low-income and minority populations where proposed actions have disproportionately high and adverse human health and environmental effects, and participation of low-income and minority populations. Accompanying EO 12898 was a Presidential Transmittal Memorandum that referenced existing federal statutes and regulations to be used in conjunction with EO 12898. The memorandum addressed the use of the policies and procedures of the NEPA. Specifically, the memorandum indicates that, "Each Federal agency shall analyze the environmental effects, including human health, economic, and social effects, of Federal actions, including effects on minority communities and low-income communities, when such analysis is required by the National Environmental Policy Act of 1969, 42 U.S.C. Section 4321 et. seq." Although an environmental justice analysis is not mandated by NEPA, DoD has directed that NEPA will be used as the primary mechanism to implement the provisions of the EO. Under its instructions for the EIAP, the Air Force must demonstrate compliance with EO 12898 to determine the effects of federal programs, policies, and activities on minority and low income populations.

Environmental justice analysis is necessary only if the environmental impact analysis indicates that there may be impacts; if there would be no environmental impacts on human populations, then there would be no disproportionate environmental impacts on minority or low-income populations. The Presidential memorandum specifies that the environmental justice analysis should be accomplished as part of the NEPA analysis; if there is no environmental impact, there is no need for an environmental justice analysis. The need for an environmental justice analysis is discussed in Section 4.6.

3.7 Traffic

The performance of a roadway segment or intersection is generally expressed in terms of level of service (LOS). LOS is a letter grade-based scale that rates the traffic flow, based upon a volume-to-capacity ratio. The LOS designations A through F represent progressively declining operating conditions, with A indicating excellent maneuverability, stable speeds, and minimal delay, and F indicating a breakdown of flow, unstable speeds, and excessive delay. LOS designations A, B, and C are considered good driving conditions with minor or tolerable delays by motorists, while D, E, and F are considered poor driving conditions to completely jammed road situations. The City of El Segundo considers the minimum acceptable LOS at an intersection to be LOS D. Intersections operating as LOS E or F are considered deficient. The Los Angeles Department of Transportation (LADOT) recognizes LOS D as the minimum acceptable level of service in urban areas.

Los Angeles Air Force base

Regional access to LAAFB is provided by the San Diego Freeway, or I-405, which is a north-south freeway located east of the project site. Local access to LAAFB includes Aviation Boulevard, El Segundo Boulevard, and Douglas Road. Entrance into LAAFB via three gates: Gate #4 (along Aviation Boulevard), Gate #5 (along Douglas Street), and Gate #8 (used only for emergencies).

Existing traffic conditions are based on the city's Circulation Element (as reported in LAAFB, 2003). Traffic data reported in previous LAAFB documents (LAAFB, 2003) show that daily traffic volumes and estimated road capacities of roadways in the City of El Segundo have good LOS ratings (see LAAFB, 2003).

Peak morning volumes generally occur between 7:15 and 7:45 a.m. with peak afternoon volumes ranging from 3:30 until 5:30 p.m. The exception is El Segundo Boulevard, which has heavy westbound traffic throughout the morning hours and heavy eastbound traffic throughout the afternoon. Douglas Street is one-way northbound, providing access on the west side of LAAFB, with peak traffic at about 7:30 a.m. and 3:30 p.m.

Fort MacArthur

The area's existing transportation setting is characterized by long-established freeways and roadways, which provide movement for automobiles, freight trucks, and, to a lesser extent, bicycles and pedestrians. Primary regional access to the study area is provided by I-110, also known as the "Harbor Freeway," northwest of Fort MacArthur, and by State Route 47 (SR-47), also known as the "Terminal Island Freeway," northeast of the project site.

Local access to Fort MacArthur is provided by a well-defined grid of arterial and collector roads. These include the following:

- Gaffey Street, a major, Class II highway that runs in the north-south direction in San Pedro, providing connection for local and regional travel from the San Pedro port terminals to Los Angeles, and points north. Three through lanes are provided in each direction in the vicinity of the Project site. Gaffey Street is a major commercial corridor within San Pedro.
- Pacific Avenue, a four-lane secondary highway that provides north-south access within San Pedro from Harbor Boulevard in the north and Shepard Street and Bluff Place in the south. It serves as a major commercial corridor within San Pedro with strip commercial businesses, auto repair, and restaurants. In the vicinity of Fort MacArthur, parallel/metered parking is provided along the curb lanes of this roadway with no left-turn lanes except at the intersection of Pacific Avenue and First Street.
- Harbor Boulevard, a major, Class II highway provides north-south access along the eastern side of the community of San Pedro. The roadway intersections at First Street, Fifth Street, Sixth Street, and Seventh Street have traffic signals. This roadway starts south of the I-110 and SR-47 freeway junction and continues on Miner Street near the Cabrillo Marina. Two through lanes and a bike lane are provided in each direction from the freeway junction to Fifth Street.
- First Street is a secondary highway that runs in the east-west direction within the study area, with one through lane provided in each direction. The roadway intersections at Gaffey Street, Pacific Avenue, and Harbor Boulevard have traffic signals.
- Fifth Street is a local roadway that runs in the east-west direction with one through lane in each direction west of Mesa Street. East of Mesa Street, Fifth Street provides two through lanes in each direction. The roadway intersections at Gaffey Street, Pacific Avenue, and Harbor Boulevard have traffic signals.
- Centre Street and Palos Verdes Street, local two-lane, north-south roadways that connect local and secondary streets such as First Street, Fifth Street, Sixth Street, and Ninth Street. Adjacent land uses along Centre Street include single- and multi-family residential units, as well as office and commercial uses near Fifth Street and Sixth Street.

The main entrance/exit to Fort MacArthur is from Pacific Avenue at Meyler Road, with an additional entrance/exit also located at 30th Street from Pacific Avenue.

A traffic study was prepared by Kaku Associates, Inc., in March 2005 (Kaku Associates, 2005) for a project about 1.3 miles north of Fort MacArthur. This study included analysis of the following intersections in the San Pedro community:

- Gaffey Street and I-110 Ramps
- Harbor Boulevard and SR-47 Ramps/Swinford Street
- Gaffey Street and First Street
- Pacific Avenue and First Street
- Harbor Boulevard and First Street
- Gaffey Street and Fifth Street
- Pacific Avenue and Fifth Street
- Harbor Boulevard and Fifth Street

All of these intersections are controlled by traffic lights. According to LADOT standards, only the intersections Harbor Boulevard and SR-47 Ramps/Swinford Street, and Gaffey Street and First Street currently operate below the acceptable level during the afternoon peak hours, but operate at an acceptable level during the morning peak hours (see Kaku Associates, 2005). All other studied intersections operate at acceptable levels during both the morning and afternoon peak hours.

Traffic data specific to Fort MacArthur and intersections closer to the facility were not available to the preparers of this EA.

3.8 Noise

The existing noise environment of LAAFB and vicinity is characterized by the mix of land uses and activities that occur within it. The vicinity is highly developed with commercial, industrial, and residential land uses. Vehicular traffic associated with these uses comprises the primary noise source within the area. Major arterials such as El Segundo Boulevard and Aviation Boulevard, as well as the San Diego Freeway (Interstate 405) are primary contributors to the noise environment. A secondary noise source is the aircraft traffic at LAX, approximately 4 miles north of LAAFB. Railroad operations along Aviation Boulevard are an additional source of noise. The Community Noise Equivalent Level (CNEL) of LAAFB is within 60 decibels (LAAFB, et. al., 2003).

The main source of existing noise within Fort MacArthur is vehicle traffic and landscape maintenance activities. Other noise sources contributing to the ambient noise environment are vehicle traffic on nearby routes, train movements of the Port Harbor Line (PHL), occasional distant aircraft overflights, movement of ships in the harbor, and general industrial noise from terminal operations in the vicinity. Noise data is not available for Fort MacArthur, but based on observations during a site visit, it is a generally quiet environment with typical residential activity.

Both the City of El Segundo (for LAAFB) and the City of Los Angeles (for Fort MacArthur) have noise regulations in their respective Municipal Codes (Title 9, Chapter 9.06 Noise and Vibration Regulation, El Segundo Municipal Code; Chapter 11 of the City of Los Angeles Municipal Code). Both cities limit the hours of construction noise (generally restricted to daylight hours) and restrict noise levels from commercial land uses on residential land use.

3.9 Air Quality

LAAFB is within the South Coast Air Basin (SCAB). The SCAB consists of the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange County, covering an area of approximately 6,000 square miles. In the SCAB area, the South Coast Air Quality Management District (SCAQMD) regulates stationary sources of air pollution through its administration of rules and regulations.

3.9.1 Climate

The annual average temperature varies little throughout the SCAB, ranging from the low to middle 60s, measured in degrees Fahrenheit (°F). With a more pronounced oceanic influence, the coastal areas (LAAFB and Fort MacArthur can be considered to be in a "coastal area") show less variability in annual minimum and maximum temperatures than inland areas. The climate at LAAFB is mild, with average monthly temperatures ranging from a low of 56°F in January to a high of 70.3°F in August. Average monthly rainfall measured in the Los Angeles area for the last 56 years varied from 2.79 inches in January to 0.81 inches or less between March and October, with an average annual total of 12.15 inches. Winds in the project vicinity have relatively low velocities and blow predominantly from the west-southwesterly direction. Low average wind speeds, together with persistent temperature inversion, limit the vertical dispersion of air pollutants throughout the SCAB and holds them relatively near the ground. The combination of stagnant wind conditions and low inversions produces the greatest pollutant concentrations.

3.9.2 Ambient Air Quality Standards

Pursuant to the CAA, the United States Environmental Protection Agency (U.S. EPA) established National Ambient Air Quality Standards (NAAQS). The NAAQS were established for six major "criteria" pollutants. Criteria pollutants are defined as those pollutants for which the federal and state governments have established ambient air quality standards for outdoor concentrations to protect public health. The NAAQS are two tiered: primary, to protect public health; and secondary, to prevent degradation of the environment (e.g., impairment of visibility, damage to vegetation and property).

The six criteria pollutants are ozone, carbon monoxide (CO), particulates less than 10 microns (PM10), nitrogen dioxide (NO2), sulfur dioxide (SO2), and lead (Pb). In July 1997, the U.S. EPA adopted a new NAAQS for particulates less than 2.5 microns (PM2.5). Ozone is a secondary pollutant formed in the atmosphere by photochemical reactions of previously emitted pollutants, or precursors. The ozone precursors are nitrogen oxides (NOX) and volatile organic compounds (VOCs).

Similarly, the State of California established the California Ambient Air Quality Standards (CAAQS) with the California Air Resources Board (CARB) as the leading agency responsible for achieving the CAAQS. The CAAQS are similar to the NAAQS; however, the CAAQS contain standards for additional pollutants (visibility reducing particles, sulfates, hydrogen sulfide, and vinyl chloride) and have more stringent standards for certain pollutants. Both the NAAQS and the CAAQS are shown in Table 3-2.

The U.S. EPA uses the NAAQS as a threshold to determine whether a region is in "attainment", "non-attainment", or "unclassified". An attainment designation means that the concentration of a

pollutant is less than the NAAQS, and a nonattainment designation is when the concentration of a pollutant has exceeded the NAAQS on more than three separate occasions in three years. An area is designated as unclassified when data are insufficient or not available to classify the area as either attainment or non-attainment. The non-attainment status is categorized into different tiers with the highest tier having the most stringent restrictions imposed by the U.S. EPA.

Under the CAA, the nonattainment classifications for CO and PM10 were further divided into moderate and serious categories. Ozone nonattainment was divided into marginal, moderate, serious, severe, and extreme categories. The CARB also designates areas that exceed the CAAQS as nonattainment for the specific pollutant.

The SCAB is in nonattainment for ozone, CO, and PM10 according to the CAAQS. With regard to the NAAQS, the SCAB is in extreme nonattainment of ozone, and serious nonattainment for PM10 and CO. The SCAB is in attainment or unclassifiable for all other NAAQS and CAAQS (2005 California Air Resources Board data available from <http://www.arb.ca.gov/desig/desig.htm>). In February 2004, the CARB submitted their recommendations to the U.S. EPA for area designations under the federal air quality standards for PM2.5. The CARB recommendation identifies the SCAB as in an area of nonattainment. The U.S. EPA is required to promulgate designations within 1 year after state recommendations are submitted and no later than December 31, 2005.

The air monitoring station closest to LAAFB is located in the City of Hawthorne and can be considered representative of Area B. Ambient air monitoring data collected at the Hawthorne monitoring station during the last three years (2001-2004) shows that the NAAQS for the eight-hour CO, one-hour NO2, twenty-four hour SO2, and eight-hour ozone standards were not exceeded. However, the CAAQS daily PM10 standard was exceeded from 8 to 12 times each year for the last three years, and the CAAQS hourly ozone standard was exceeded once each year for the last two years.

The air monitoring station that best represents the air quality in the Fort McArthur area is the North Long Beach monitoring station. The NAAQS were exceeded only for PM2.5 (24-hour and annual) at this station. Exceedances of the California standards were recorded at the North Long Beach station for ozone (1-hour), PM10 (24-hour and annual), and PM2.5 (annual) on one or more occasions from 2000 through 2004. No exceedances of either the state or national standards were recorded for SO2, lead, NO2, and CO.

Table 3-2. National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California Standards ^(a,c)	National Standards ^(b)	
			Primary ^(c,d)	Secondary ^(c,e)
Ozone	1-hour	0.09 ppm (180 µg/m ³)	0.12 ppm (235 µg/m ³)	Same as primary standard
	8-hour ^(f)	--	0.08 ppm (157 µg/m ³)	Same as primary standard
Carbon monoxide	8-hour	9 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)	--
	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	--
Nitrogen dioxide	Annual Arithmetic Mean	--	0.053 ppm (100 µg/m ³)	Same as primary standard
	1-hour	0.25 ppm (470 µg/m ³)	--	--
Sulfur dioxide	Annual Arithmetic Mean	--	0.03 ppm (80 µg/m ³)	--
	24-hour	0.04 ppm (105 µg/m ³)	0.14 ppm (365 µg/m ³)	--
	3-hour	--	--	0.5 ppm (1,300 µg/m ³)
	1-hour	0.25 ppm (655 µg/m ³)	--	--
PM ₁₀	Annual Arithmetic Mean	20 µg/m ³ ^(g)	50 µg/m ³	Same as primary standard
	24-hour	50 µg/m ³	150 µg/m ³	Same as primary standard
PM _{2.5}	Annual Arithmetic Mean	12 µg/m ³ ^(g)	15 µg/m ³ ^(h)	Same as primary standard
	24-hour	--	65 µg/m ³ ⁽ⁱ⁾	Same as primary standard
Lead	30-day	1.5 µg/m ³	--	--
	Quarterly	--	1.5 µg/m ³	Same as primary standard
Sulfates	24-hour	25 µg/m ³	--	--
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m ³)	--	--
Vinyl chloride	24-hour	0.01 ppm (26 µg/m ³)	--	--
Visibility reducing particles	8-hour (10 a.m. to 6 p.m., Pacific Standard Time)	In a sufficient amount to produce an extinction coefficient of 0.23 per kilometer-visibility of 10 miles or more due to particles when the relative humidity is less than 70 percent.	--	--

- Notes: (a) California standards for ozone, carbon monoxide, sulfur dioxide (1 hour and 24 hour), nitrogen dioxide, PM₁₀, PM_{2.5}, and visibility reducing particles are values that are not to be exceeded. The sulfates, lead, hydrogen sulfide, and vinyl chloride standards are not to be equaled or exceeded.
- (b) National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic mean) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. For PM₁₀, the 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. For PM_{2.5}, the 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. Contact the U.S. EPA for further clarification and current federal policies.
- (c) Concentrations are expressed first in units in which they were promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 millimeters (mm) of mercury. All measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 mm of mercury (1,013.2 millibar); ppm in this table refers to parts per million by volume, or micromoles of pollutant per mole of gas.
- (d) National Primary Standards: The levels of air quality necessary, with an adequate margin of safety to protect the public health.
- (e) National Secondary Standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of pollutant.
- (f) New federal 8-hour ozone and PM_{2.5} standards were promulgated by the U.S. EPA on July 18, 1997. Contact U.S. EPA for further clarification and current federal policies.
- (g) On June 20, 2003, the CARB approved the recommendations to revise the PM₁₀ annual average standard to 20 µg/m³ and to establish an annual average standard for PM_{2.5} of 12 µg/m³. These standards will take effect upon final approval by the Office of Administrative Law.
- µg/m³ = micrograms per cubic meter
 mg/m³ = milligrams per cubic meter
 PM_{2.5} = particulate matter equal to or less than 2.5 microns in diameter
 PM₁₀ = particulate matter equal to or less than 10 microns in diameter
 ppm = parts per million

3.9.3 General Air Quality Requirements

As a requirement to comply with the NAAQS, regions classified as non-attainment for any pollutant are required to prepare an air quality management plan (AQMP) for each non-attainment pollutant. The AQMPs are updated and amended periodically to revise old strategies or provide new strategies to comply with the NAAQS. A draft 2003 AQMP (containing revisions of the 1997 AQMP strategies together with new strategies) was prepared by SCAQMD and is currently being solicited for public comments before submission to the CARB for approval. The new AQMP demonstrates attainment of the NAAQS and CAAQS through the implementation of new emission control measures. It also provides revised and updated emissions inventories and emissions budgets, and demonstrates the decrease in emissions. The AQMPs and similar attainment plans from each non-attainment region are then submitted, reviewed, approved, then incorporated into the State Implementation Plan (SIP) by CARB. The SIP is then submitted to the U.S. EPA for approval.

Section 176c of the CAA provides that a federal agency cannot support an activity in any way unless the federal agency determines that the activity will conform to the SIP's purpose of attaining and maintaining the NAAQS (Table 3-2). In accordance with this part of the CAA, U.S. EPA announced promulgation of its final General Conformity Rule (GCR) for general federal actions for nonattainment and maintenance areas in the November 30, 1993, Federal Register (40 CFR Part 51). The GCR mandates that the federal government not engage, support, provide financial assistance, or approve any activity not conforming to an approved SIP. Complying with the GCR requires an assessment to determine whether the proposed project is subject to GCR, and if so, whether it conforms to the applicable SIP. The GCR applies to LAAFB because the installation is situated within a nonattainment area of the NAAQS for ozone, CO, and PM10.

3.9.4 Types and Sources of Air Quality Pollutants at LAAFB

LAAFB environmental staff (61 CELS/CELEV) maintain a database of permitted and nonpermitted air emissions sources. LAAFB has four air permits: a portable diesel emergency generator at Building 229, a 757-hp diesel emergency generator located at Building 272, and two 183-hp diesel engines (emergency fire pump engines) located at Building 288. The SCAQMD regulates stationary air emission sources and regularly inspects these permitted sources. Sources at LAAFB that do not require a permit include chillers, woodworking, welding operations, waste oil tanks, water-based degreasers (parts cleaners), propane tanks, chlorofluorocarbon (CFC) recovery units, laboratory chemical usage, miscellaneous chemical usage, abrasive blasting operations, charbroilers, woodworking, grounds maintenance equipment, welding activities, and diesel fuel aboveground storage tanks (ASTs). There are no individual solvent cleaning or surface coating emissions at on LAAFB.

Fort MacArthur has two permitted sources, a 277-hp portable emergency generator located near Building 78 and a woodchipper located near Building 78. A charbroiler located at Building 403 is registered with SCAQMD, but not permitted. Emission sources at Fort MacArthur that are not required to have permits include natural gas boilers, chillers, small diesel and gasoline generators, a CFC recovery unit, a halogen system, welding operations, woodworking, grounds maintenance equipment, charbroilers and diesel fuel ASTs. There are no solvent-cleaning, individual surface coating, laboratory chemicals, or abrasive blasting emissions at Fort MacArthur. According to an emissions inventory in 2003 (SAIC, 2005), the emission totals are dominated by the CO emissions from gasoline combustion processes within grounds maintenance equipment.

3.10 Hazardous Materials and Waste

3.10.1 Hazardous Materials

Hazardous materials have been identified in AFI 32-7086, *Hazardous Materials Management*, to include any substance with special characteristics that could harm people, plants, or animals when released. Hazardous materials are usable products that may pose a physical threat or hazard to humans or the environment. Such materials include, but are not limited to, flammable liquids, combustible liquids, corrosives, and compressed gases.

Hazardous materials are stored in various locations throughout LAAFB. Building and grounds maintenance, Material Control, base supply, Center, and the Medical/Dental Clinic use several types of hazardous materials that are generally stored in small quantities and within customary consumer containers. Oils and fuels are the only bulk hazardous materials stored at the site.

The principal sources of hazardous materials and wastes at Fort MacArthur are paints and used petroleum products generated as part of building maintenance. The primary user of hazardous materials at Fort MacArthur is the Civil Engineering Department. Maintenance chemicals such as paint, spackle, thinner, motor oil, adhesives, solder, and polyvinyl chloride (PVC) cement are stored in flammable material storage lockers in Building 68. Acetylene, oxygen, and air conditioning system refrigerants are stored in Building 78. Building 401 also contains hazardous materials for pool water treatment purposes: sodium hypochlorite (approx. 330 gallons), muriatic acid (approx. 75 gallons), bleach (several 15-gallon drums and gallon-size containers), and smaller quantities of sodium bicarbonate, algaecides, cyanuric acid hydrate, and liquid carbon dioxide.

Hazardous materials at LAAFB are controlled and handled by the Base Supply Hazardous Materials Control Unit, which requisitions, receives, stores, and issues hazardous materials to Material Issue Centers (MICs). Hazardous materials are controlled and tracked by using the Hazardous Materials Management System (HMMS). Hazardous materials procured by LAAFB, except for the materials used at Aerospace Corporation and those used or sold by the AAFES Base Exchange, are received by the Central Receiving Section.

The MIC locations are

- LAAFB: Building 210 (Medical Squadron), Building 229 (Civil Engineering), and Building 285 (Base Supply)
- Fort MacArthur: Building 68 (Civil Engineering). Hazardous materials are also stored at Fort MacArthur's Self-Help Store, Building 64.

LAAFB has a Hazardous Materials Business Plan as required by the state of California, California Health & Safety Code, Division 20, Chapter 6.95, Article 1 and Title 19 CCR. It is administered by the local certified unified program agencies, El Segundo Fire Department (LAAFB) and the City of Los Angeles Fire Department (Fort MacArthur). The program requires the preparation of a plan that contains a list of all chemicals at LAAFB that are stored in quantities greater than 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet (gases). The plan is submitted to the local fire departments annually.

3.10.2 Hazardous Waste Management

Hazardous waste is regulated by the U.S. EPA, 40 CFR, and the State of California Environmental Protection Agency (CAL-EPA), 22 CCR. Hazardous waste handling and transportation is regulated

by the Department of Transportation (DOT) and the OSHA regulations. These regulations require tracking and record keeping of hazardous waste from "cradle to grave" as well as specific procedures for labeling, storage, transportation, and disposal.

LAAFB has developed and implemented an installation *Hazardous Waste Management Plan* (HWMP; LAAFB, 2005b) that defines and establishes the hazardous waste management program on LAAFB. The HWMP includes policies to ensure that LAAFB conducts activities in a manner that protects and enhances environmental quality. The HWMP specifies protocols for storage locations on the base and proper handling procedures for all hazardous substances. Protocols described in the HWMP include spill detection, spill reporting, spill containment, decontamination, and proper cleanup and disposal methods. The HWMP was prepared to meet Air Force Instruction 32-7042, *Solid and Hazardous Waste Compliance*; Air Force Pamphlet 32-7043, *Hazardous Waste Management Guide*; the Resource Conservation and Recovery Act (RCRA) as amended by the Hazardous and Solid Waste Amendments of 1984; and the California Hazardous Waste Control Law. It applies to all LAAFB activities and outlines responsibilities and procedures for the generation, collection, identification, storage, spill prevention, and control of hazardous waste. Responsibilities and procedures are outlined for the generation, collection, identification, storage, spill prevention, and control of hazardous waste. Environmental Engineering (61 CELS/CELEV) is a branch of 61 CELS, and is responsible for implementing the Base HWMP.

The HWMP provides information on the proper management of hazardous waste at LAAFB, including the following:

- Hazardous waste handling procedures
- Hazardous waste packaging procedures
- Marking and labeling procedures
- Hazardous waste storage procedures
- Hazardous waste container tracking system
- Procedures for off-site transfer of hazardous waste
- Management of recyclable materials
- Management of abandoned waste

The U.S. EPA designates facilities as large quantity generators of hazardous waste when wastes generated exceed 2,200 pounds any month during the year. Both LAAFB and Fort MacArthur are large-quantity hazardous waste generators. Both facilities have also obtained U.S. EPA Identification Numbers.

A list of hazardous wastes generated at LAAFB (all areas) is provided below (Source: LAAFB, 2005b):

- | | |
|--------------------------------|-------------------------------|
| • Waste Aerosol Spray Cans | • Fuel/Drysweep/Spill Cleanup |
| • Used Antifreeze | • Oily Rags |
| • Paint Debris (Rollers, etc.) | • Waste Asbestos |
| • Toner | • Lead/Asbestos Mixed Waste |

- Waste Aerosol Spray Cans
- Lead-Based Paint Chip Debris
- Ceiling Tiles Containing Lead
- Oil-Contaminated Dry Sweep
- Polychlorinated Biphenyl (PCB) Ballasts
- Used Oil
- Waste Paint /Thinner
- Crushed & Drained Oil Filters
- Contaminated Soil with Diesel/Oil
- Lead/Acid Batteries
- Nickel/Cadmium Batteries
- Lithium Batteries
- Alkaline Batteries
- Hydraulic Fluid
- Contaminated Dry Sweep w/Antifreeze
- Fuel/Drysweep/Spill Cleanup
- Waste Diesel
- Transmission Fluid
- Compressor Oil
- Coumadin (Warfarin Sodium Empty Containers)
- Silver Amalgam
- Lead Containing Key Tailings
- Refrigerant Oil
- Methanol
- Trichloroacetic Acid
- Broken Light Tubes
- Gas & Transmission Filters
- Hydrochloric Acid
- Fuel/Drysweep/Spill Cleanup

In keeping with the requirements outlined in the HWMP, hazardous waste is properly segregated, stored, characterized, labeled, and packaged for collection at a designated initial accumulation point (IAP). IAP managers ensure drums are properly marked and labeled. IAP areas may accumulate 55 gallons of hazardous waste, one quart of acutely hazardous waste, or one quart of acutely hazardous waste up to one year from the initial date of accumulation or until the container becomes full, whichever occurs first. When the container becomes full (i.e. 5 to 10% air space left), the IAP manager notifies the ACCS manager and transports the drum to ACCS where it is stored until disposal is economically practicable or before 90 days have elapsed, whichever comes first. The container is transported to ACCS no later than 72 hours after it becomes full. Waste from the LAAFB IAP's are consolidated into three metal hazardous waste accumulation steel building systems that are located just north of Building 215, (The Auto Skills Center).

At Fort MacArthur, there are two IAPs (Buildings 68 and 72) and one 90-day accumulation point (Building 78).

After consolidation of wastes at the 90-day accumulation areas at both LAAFB and Fort MacArthur, a licensed disposal contractor picks up the waste from the 90-day accumulation area and transports it off site for disposal or treatment at a licensed transportation, storage, and disposal facility.

3.10.3 LAAFB Emergency Response Plan

As part of LAAFB's cradle-to-grave management of hazardous waste, Environmental Engineering has prepared the *Los Angeles AFB Hazardous Waste Emergency Response Plan* (LAAFB, 2005a), which serves as a contingency plan for emergency situations. The *Los Angeles AFB Hazardous*

Waste Emergency Response Plan specifies procedures that minimize hazards to human health and the environment from fires, explosions, or any unplanned sudden or nonsudden release of hazardous waste (22 CCR 66260.10). Some of the key plan elements include tasked organizations and individuals and their responsibilities, local agencies for emergency notification and support, site-specific contingency plans, spill response equipment inventories, spill response notification procedures, and spill response personnel training.

The Emergency Response Plan is also referred to as a Hazardous Waste Contingency Plan (HWCP), which meets the requirements of 22 CCR Sections 66265.50 through 66265.56. The generator of the waste must implement the HWCP in the event of a release of hazardous waste or other facility emergencies involving hazardous waste. Implicit in the regulations is the fact that an HWCP must address the specific facility's needs for emergency response capability in a manner consistent with the nature of the facility's hazardous wastes and the scope of its operations.

3.10.4 Asbestos-Containing Material

Asbestos-containing material (ACM) is any material containing more than one percent by weight of asbestos that can be crumbled, pulverized, or reduced to powder, when dry, by hand pressure. Asbestos is made up of microscopic bundles of fibers that may be airborne when distributed or damaged. These fibers get into the air and may be inhaled into the lungs, where they may cause significant health problems. Due to its ability to withstand heat, fire, and chemicals, historically, asbestos has been used in construction materials, and is typically found in ceiling tiles, pipe and vessel insulation, floor tile, linoleum, mastic, and on structural beams and ceilings.

Several different Federal, state and local agencies regulate asbestos. Generally, worker exposure is regulated by the Federal OSHA and its California State counterpart Cal/OSHA. Atmospheric emissions of asbestos are regulated under the Federal National Emission Standard for Hazardous Air Pollutants, which is enforced locally by the SCAQMD.

On the waste disposal side, jurisdiction over asbestos containing wastes is more complex. A key factor governing regulation of asbestos waste disposal is whether or not the asbestos is in a "friable" form (i.e. can be reduced to a powder or dust under hand pressure when dry). Wastes that contain only non-friable asbestos are not subject to management as a hazardous waste under state hazardous waste laws, regardless of their asbestos content; however, they are still regulated under air quality management regulations. Additional crushing, drilling, sawing or handling by other methods that release asbestos fibers can cause non-friable waste to become friable as well as trigger OSHA and Air District requirements.

The Department of Toxic Substances Control (DTSC) has classified friable, finely and powdered wastes containing more than one percent asbestos as a hazardous waste, and specifies special procedures for the handling and disposal of such wastes. These special procedures cover packaging, labeling and manifesting of such wastes. In addition, asbestos containing wastes totaling more than 50 pounds must be transported by a registered hazardous waste hauler to a permitted hazardous waste disposal facility.

ACM is assumed or known to be present in all older LAAFB buildings and in some Fort MacArthur buildings, given building age and the results of limited asbestos surveys completed in the past. ACM is also present in some utilities including transite/asbestos cement piping for water distribution, thermal system pipe insulation and asbestos-insulated conductors. Any time a building renovation is planned, an asbestos survey is conducted and the data are compiled in a computer database maintained by Base Environmental Engineering. Asbestos has been detected in materials such as walls and gypsum wallboard, water pipes, floor tiles and mastic ceiling tiles, and stucco.

ACM is also expected to be present in some of the utility systems at LAAFB. Water distribution piping at LAAFB and Fort MacArthur may be primarily or partially comprised of asbestos-concrete pipe. Civil Engineering staff indicated ACM may also be present at these areas in the form of asbestos-insulated conductors in high voltage electrical systems and asbestos-concrete wiring conduits. Recent construction projects within LAAFB have encountered subsurface ACM in various forms including transite piping to asbestos encased in concrete for abandoned utility lines.

Applicable regulations do not require the removal of asbestos solely due to its presence. However, before demolition of buildings, a complete asbestos survey must be conducted in accordance with SCAQMD Rule 1403 and owners are required to implement management practices that minimize personnel exposure to ACM and to address asbestos material before renovation or demolition activities.

LAAFB has developed and implemented an asbestos management plan to comply with applicable federal and state requirements during demolition and renovation activities, as well as to maintain affected structures in a manner protective of public health.

Any construction or demolition activities that are performed within the vicinity of the ACM should comply with local, state, and federal regulations including OSHA standards and the National Emissions Standard for Hazardous Air Pollutants (NESHAP) regulation (40 CFR Part 61, Subpart M). ACM must be removed from the buildings before any activity begins that would break up, dislodge, or similarly disturb the materials or preclude access to the material for subsequent removal. Any damaged ACM should be abated or encapsulated according to federal, state, and local regulations.

Asbestos surveys will be performed before demolition of any building in accordance with applicable regulations.

3.10.5 Lead-Based Paint

Lead-based paint (LBP) was commonly used from about 1940 through 1978 for exterior and interior painted surfaces. In 1978, the U.S. Consumer Product Safety Commission lowered the legal maximum lead content in most kinds of paint to trace amounts; therefore, buildings constructed after 1978 are presumed to not contain LBP. The use and management of LBP is regulated under Section 1017 of the Residential Lead-Based Paint Hazard Reduction Act of 1992. Section 1017 requires the implementation of federally supported work involving risk assessments, inspection, interim controls, and abatement of LBP hazards. Regulations relating to LBP can be found at 29 CFR, 40 CFR, and 49 CFR.

Some buildings and parking lot structures (painted curbs, etc.) on LAAFB and Fort MacArthur also contain LBP. There are no non-residential regulations requiring LBP removal. However, the presence of LBP requires consideration in regard to renovation/repainting or demolition debris disposal activities. Construction work where an employee may be exposed to lead must comply with 29 CFR Part 1926.62. A LBP survey is recommended before any planned renovations or building demolition, if the specific work area and painted elements within it have not been previously characterized.

Under U.S. EPA's Title X, Section 403 of the Housing and Community Development Act of 1992, national guidelines for lead hazards in dust, soil, and paint have been developed to assist property owners in determining lead hazards. Under these guidelines, dangerous conditions of LBP exist when lead is in excess of either 1.0 milligrams per square centimeter (mg/cm^2) or 0.5 percent by weight. At the county level, the threshold for LBP is $0.7 \text{ mg}/\text{cm}^2$ (Los Angeles County Code,

Chapter 11.28). The Base Environmental Office (61 CELS/CELEV) has developed and implemented an LBP management plan to comply with applicable federal and state requirements for LBP during demolition and renovation activities, as well as to maintain affected structures in a manner protective of public health.

A comprehensive LBP survey has not been completed at either LAAFB or Fort MacArthur. However, when renovations are necessary, partial surveys are conducted to ensure safe working conditions. Base Environmental maintains a LBP inventory containing the results of partial surveys. Painted floors, ductwork, beams, and piping represent some of the painted elements which were found to contain lead at concentrations greater than 0.5 percent by weight. Abatement projects have been undertaken at Buildings 207, 208, 219, 220, and 228 to address LBP as dictated by renovation projects. However, the abatement work conducted was limited and LBP is expected to be present on the LAAFB buildings. A complete LBP survey is completed on each building before building demolition.

It is presumed that LBP is not present in the housing areas at Fort MacArthur constructed in 1982, 1985, and 1987-1989.

3.10.6 Management of Other Specific Hazardous Materials and Wastes

Medical/Biohazardous Waste

The Air Force Medical/ Dental Clinic is housed at LAAFB, Building 210. Biohazardous wastes are accumulated in 5-gallon plastic-lined containers throughout the clinic. Wastes are transferred to and stored in a roll-off trash bin. The waste is then picked up and disposed of off-site by a licensed medical waste contractor.

At Fort MacArthur, an Air Force Clinic is located in Building 30 and a Veterinary Clinic is located in Building 417. Biohazardous wastes are picked up and disposed of off-site by a licensed medical waste contractor.

Ordnance

An armory was located in the Security Forces Operations portion of Building 241, and this armory is the only area where munitions were stored on LAAFB (Malcolm Pirnie, 2000, Volume II, Section 4). Small arms ammunition was removed from the building before demolition activities and relocated off-site. Small arms ammunition is maintained by Security Police and used for its intended purpose. This ammunition is not considered a solid waste or hazardous waste for regulatory purposes.

Real property accountable records indicate that former Building 221 was at one time used to store explosives. A bunker located east of Building 221 was used to calibrate aircraft gun sights (via test firing) during Navy occupation of the site. The building is no longer present on LAAFB.

At Fort MacArthur, the former American Trona Plant, Building 425, was a potash fertilizer refinery built in 1917. The U.S. Army acquired it in 1942. Anecdotal information suggests that it was used for the production of fertilizer and munitions. Other ordnance at Fort MacArthur includes munitions maintained by Security Police.

Radon

A limited radon survey was conducted on LAAFB by Bio- Environmental Engineering personnel in the basement of the previous Medical/Dental Clinic, Building 200, which has since been demolished.

The National Radon Database developed by the U.S. EPA presents data from the U.S. EPA/State Residential Radon Survey and the National Residential Radon Survey. Currently, the U.S. EPA threshold for radon levels cannot exceed 4 picoCuries per liter (pCi/L) or greater. Of 63 sites tested in Los Angeles County, 98 percent reported indoor radon levels below 4 pCi/L and 2 percent reported levels between 4 and 20 pCi/L on the first floor living areas. One hundred percent reported radon levels less than 4 pCi/L in the basements. The U.S. EPA assigns each county in the U.S. to one of three zones, based on radon potential that "reflects the average short-term radon measurement that can be expected to be detected in a building without the implementation of radon control methods." Los Angeles County has an U.S. EPA Radon Zone of 2, meaning the indoor radon level is greater than or equal to 2 pCi/L and less than or equal to 4 pCi/L (Environmental Data Resources [EDR], 2003).

Radiological Substances

Radioactive material is used on LAAFB for medical purposes. The medical clinic, Building 200, has a radiology department on the first floor and a dental department on the second floor. Both departments have radioactive materials.

At Fort MacArthur, neither the Air Force Clinic in Building 30 nor the Veterinary Clinic in Building 417 are equipped with x-ray equipment. No information was found which indicated the storage or use of radiological substances at Fort MacArthur.

Pesticides

Pesticides are routinely applied throughout, LAAFB, Fort MacArthur, and the Pacific Crest/ Pacific Heights Military Family Housing areas, in accordance and conformance with LAAFB's Pesticide Management Plan (LAAFB, 2005d). Only those insecticides, herbicides, and fungicides found on the DoD standardized approval list are applied. Pesticide application is performed by a private vendor that stores and handles its own chemicals offsite.

PCBs

PCBs are a group of toxic chemicals regulated under the Toxic Substances Control Act (TSCA). PCBs present a potential hazard to human health and the environment when spilled or released. In California, liquids containing at least 5 parts per million (ppm) PCBs are regulated by the DTSC. PCBs are also included on the Proposition 65 list of chemicals known to cause cancer. The Federal threshold for regulation under TSCA is 50 ppm.

By December 31, 1998 the Air Force required its installations to be "PCB-Free," meaning that equipment regulated under TSCA would be eliminated. Attachments to the Air Force memorandum also explain that leaking PCB-containing equipment would be removed. In compliance with this program, Base Environmental staff indicated that electrical equipment (e.g., transformers, capacitors, and circuit breakers) whose dielectric fluid contains greater than 50 ppm PCBs have been removed or replaced with non-PCB containing equipment (LAAFB et al., 2003). All transformers on LAAFB buildings are reportedly now labeled PCB-free. According to a binder in Environmental Engineering entitled "Liquid-Filled Transformers at LAAFB," 45 liquid-filled transformers are located throughout Fort MacArthur, but all of these contain less than 50 ppm PCBs (Malcolm Pirnie, Inc., 2003b).

The Air Force PCB-free program did not include small capacitors and light ballasts containing small PCB-capacitors (U.S. Air Force Memorandum, 1998, and attachment entitled "PCB Elimination Technical Guidance"). PCBs at LAAFB and Fort MacArthur are contained in fluorescent light fixture ballasts and liquid-filled transformers. Base Civil Engineering has instituted a program to slowly eliminate PCB ballasts by replacing the ballasts when repairs are needed. When PCB-

containing ballasts are removed or replaced, the PCB ballasts are accumulated and then disposed of off-site in accordance with California Hazardous Waste regulations.

3.10.7 Solid Waste Management

Local private contractors collect and dispose of solid waste generated at LAAFB. The closest major landfill to LAAFB is Puente Hills, owned and operated by the Los Angeles County Sanitation District. The Puente Hills landfill is a Class III landfill and currently receives 13,000 tons per day of municipal solid waste (LAAFB, 2003). The Bradley Landfill and Recycling Center and the Sunshine Canyon Landfill also serves the El Segundo area for disposing of solid waste. The Bradley landfill is located at 9081 Tujunga Avenue in Sun Valley and the Sunshine landfill is located at 1474 San Fernando Road in Sylmar. The Bradley landfill accepts non-hazardous solid wastes, inert solid wastes, auto shredder fluff, autoclaved medical waste, pesticide/empty containers, and petroleum contaminated soils and has a permitted tonnage capacity of 10,000 tons per day. Any demolition that is to occur on-site would likely be disposed of at the Bradley landfill, which accepts demolition and construction waste.

The local hazardous waste landfill serving the El Segundo area and LAAFB is the Azusa Land Reclamation, a Class III landfill, located at 1211 W. Gladstone Street in Azusa. The Azusa landfill accepts only inert waste, concrete, asphalt, clean soils, asbestos friable/non-friable, whole tires and petroleum-contaminated soils for treatment. The site has a permitted tonnage capacity of 6,000 tons per day.

3.11 Safety and Occupational Health

Health and safety at LAAFB are regulated by the Air Force Occupational and Environmental Safety, Fire Protection, and Health (AFOSH) Program (AFI-91-301) (U.S. Air Force, 1997), OSHA, and traffic safety requirements. The health assurance of personnel at LAAFB is supervised by Bioenvironmental Engineering Services. Bioenvironmental Engineering Services assures facilities meet the appropriate health and safety guidelines, including those pertaining to asbestos. LAAFB Environmental Engineering office supervises transport of hazardous materials and wastes within the facilities.

To address safety and health concerns associated with standard construction and/or demolition activities, LAAFB personnel review all plans before any construction activities. All construction personnel are required to comply with OSHA Safety and Health Regulations for Construction (29 CFR), and other relevant federal and state regulations.

3.12 Topography, Geology, Soils, and Natural Hazards

3.12.1 Geology and Soils

Topographically, the Los Angeles Basin is a lowland plain nearly 50 miles long and 20 miles wide with a 2 percent downward slope running northeast to southwest. Geologically, it is characterized by unconsolidated and indurated sediments in a succession of strata from Jurassic to Recent age. Both LAAFB and Fort MacArthur lie within the western portion of the Los Angeles Basin. Specific geological information follows for each.

Los Angeles Air Force Base (LAAFB)

Regionally, LAAFB is located within the Peninsular Ranges geomorphic province, an area characterized by a succession of elongated mountain ridges separated by straight-sided sediment-filled valleys. The dominant geologic structural features of the province tend to follow a northwest to west-northwest orientation. The nearby Newport-Inglewood fault zone, located approximately 3.2 miles north-northeast of the site, conforms to the northwest-trending nature of the province (LAAFB, et al., 2003, Volume I, Section 3.4.1.1). Bedrock in the vicinity of LAAFB is impervious and non-water bearing consisting of the metamorphic rocks of the Franciscan Formation and Catalina Schist, which are overlain unconformably by rocks of Miocene age.

Specifically, LAAFB is located in the City of El Segundo on the physiographic feature known as the El Segundo Sand Hills, which consists of sand dunes and hills that extend inland from the Pacific Ocean approximately 3.5 miles. The youngest deposit underlying LAAFB consists of a veneer of late Pleistocene quartz dune sand. This deposit is mapped as Older Dune Sand and consists of fine-to-medium grained sands with minor amounts of gravel, sandy silt, and clay. The Older Dune Sand ranges up to 200 feet in thickness. (Malcolm Pirnie, Inc., 2000, and 2003b, Vol. I, Section 3.4.1.1).

The natural soils on LAAFB include silty fine sand from the ground surface to approximately 5 feet below and clayey sand from a depth of 5 to 10 feet. This material consists of dark brown to dark gray, clayey silt. Alluvial sediments are believed to underlay the site at depth. Lithologic (subsurface soil) logs from the installation of three groundwater monitoring wells installed on LAAFB indicate that the underlying alluvial deposits consist primarily of interbedded lenses of silty sand, clayey sand, lean clay, and silty lean clay of variable thicknesses (URS, 2000).

Fill material has been found overlying the natural soil at depths of 0 to 3 feet, though lithologic logs from recent soil borings from the lot surrounding Building 244 (Base Exchange) in LAAFB (Malcolm Pirnie, Inc. 2003a) indicate that fill material consisting of light brown to dark gray, clayey silt to silty clay is present from 0 to 9 feet. As a result of the fill material being deposited over the natural soil, the topography of LAAFB is generally flat. Surface elevations range from 92 feet above mean sea level (MSL) along the southern edge of the property to 98 feet above MSL along the northern edge of the property. The soils of LAAFB are largely covered as the area is used primarily for buildings and asphalt paved vehicle parking.

Fort MacArthur

Regionally, Fort MacArthur is located within the Los Angeles Basin on the lowland plain at the southeastern end of the Palos Verdes Peninsula, a fault block that rose out of the Pacific Ocean more than a million years ago. Immediately to the west of Fort MacArthur is the Palos Verdes Fault. This fault is a northwest to southwest trending feature with little surficial displacement in the last 10,000 years. As a result of this fault, Jurassic age Catalina Schist, Miocene age volcanics, and the Miocene Monterey Formation have been exposed (Environmental Science and Engineering, Inc., 1985b). The Monterey Formation consists of predominately massive shale, micaceous siltstone, and lesser amounts of fine to medium-grained sandstone. The Pliocene Repetto Formation overlies the Monterey Formation. The Repetto Formation consists of marine, sandy siltstone, claystone, and shales (Environmental Science and Engineering, Inc., 1985b). Bedrock in the vicinity of Fort MacArthur consists of Jurassic Shist and Miocene age volcanics.

Specifically, Fort MacArthur is located in the San Pedro area of Los Angeles on a sandstone bedrock bluff overlooking the western edge of the Los Angeles Harbor and Pacific Ocean. The bluff is part of the Palos Verde Hills. Soils in the area consist of the Diablo-Altamont Association. This sandy soil has a moderate potential for water erosion and a high potential for wind erosion. In these areas, the soils are largely covered by pavement and other structures.

Because of the nature of the underlying bedrock, Fort MacArthur does not have a well-developed aquifer system. Monterey shale is considered highly impervious, with groundwater only occurring in localized sand units. The water is highly saline and does not have a hydraulic connection to freshwater recharge. Small, localized perched water tables may occur on top of the silty clay units; however an aquifer system has not been defined (Environmental Science and Engineering, Inc., 1985b).

3.12.2 Topography and Stormwater Drainage Pattern

Los Angeles Air Force Base (LAAFB)

LAAFB has a relatively flat topography with surface elevations ranging from 92 feet above MSL along the southern edge of the property to 98 feet above MSL along the northern edge. Due to the small amount of exposed natural soils in LAAFB, there is very little infiltration of rainfall. The majority of precipitation leaves the installation via evaporation or in the form of storm water runoff. The storm water runoff is collected in open catch basins and routed through an underground system of 4-inch to 36-inch vitrified clay, cast iron, or reinforced concrete pipes. The drainage system is connected to the Los Angeles County Flood Control District storm drain system (Environmental Science and Engineering, Inc., 1985a).

Fort MacArthur

Fort MacArthur has a sloped topography with surface elevations ranging from 70 feet above MSL along Pacific Avenue at the western boundary to 50 feet above MSL along the top of the bluff bordering the eastern boundary. The bluff is a descending, east-facing 25 to 40 feet high escarpment with variable slopes ranging from approximately 45 degrees to near vertical (Environmental Science and Engineering, Inc. 1985b). The land on Fort MacArthur is used primarily for buildings and asphalt-paved vehicle parking. As little natural soil is exposed, the installation contains storm water drainage systems to control runoff. The storm water runoff is collected in open catch basins and routed through an underground system of 4-inch to 45-inch asbestos or reinforced concrete pipes. All storm drains eventually discharge into Los Angeles Harbor (Environmental Science and Engineering, Inc. 1985b).

3.12.3 Natural Hazards

Seismic Conditions

All LAAFB properties are considered to be in Seismic Zone IV and the National Earthquake Hazards Reduction Program (NEHRP) Map Zone 7, which represents a high potential risk for large seismic events. LAAFB is in the vicinity of several active faults, including the San Andreas, Newport-Inglewood, San Fernando, Sierra Madre, and Verdugo (LAAFB, et. al., 2003). LAAFB is located approximately 3 miles from the active Newport/Inglewood Fault and 0.6 to 1.2 miles north of the inactive Carnok Fault (Tetra Tech, Inc., 2001).

Fort MacArthur lies within the San Pedro Shelf Section of the Palos Verdes Fault Zone. The fault is approximately 1.2 miles wide and extends from beneath the San Pedro Bay to the Palos Verdes Hills. The total length of the zone may exceed 30 miles. Fort MacArthur is located approximately 1.2 miles south of the active Palos Verdes Fault, and it also lies along the active Cabrillo Fault.

Visible fault lines are not present within a 2-mile radius of LAAFB however visible fault lines do exist within approximately 3 miles of LAAFB (Environmental Data Resources, 1999a).

The Alquist-Priolo Earthquake Fault Zoning Act was passed in 1972 to mitigate the hazard of surface faulting to structures for human occupancy. The purpose of this Act is to prevent construction of buildings used for human occupancy on the surface trace of faults. The City of El Segundo (including LAAFB) is not located within an Alquist-Priolo Earthquake Fault Zone (California Department of Conservation, 2005). Based on the available geologic data, active or potentially active faults with the potential for surface fault rupture are not known to be located directly beneath or projecting toward LAAFB (LAAFB et al., 2003, Volume I, Section 3.4.1.6); therefore, the potential for surface rupture due to fault plane displacement propagating to the surface at LAAFB during the design life of the buildings is considered low (LAAFB et al., 2003, Vol. I, Section 3.4.1.6).

While the entire Southern California region is subject to seismic ground shaking as a result of earthquakes, some facilities are better prepared for and able to withstand these seismic events. "The existing buildings at LAAFB...were built in the 1950s and 1960s, before the implementation of the current building and seismic codes. These buildings are not constructed to the current building standards and therefore, are more susceptible to damage from seismic ground shaking than buildings that have been constructed in accordance with these codes" (LAAFB et al., 2003, Vol. I, page 3.4.1-22).

The Alquist-Priolo Earthquake Fault Zoning Act only addresses surface fault ruptures and does not address other earthquake hazards. However, the Seismic Hazards Mapping Act of 1990 addresses non-surface fault rupture earthquake hazards, including seismically induced landslides and liquefaction. The Seismic Hazard Zones Map for Venice Quadrangle (the quadrangle in which LAAFB is located) indicates that LAAFB is not situated within an area of concern for liquefaction or seismically induced landslides (California Department of Conservation, 1999a). A review of the Seismic Hazard Zones Map for San Pedro Quadrangle (the quadrangle in which Fort MacArthur is located) indicates that Fort MacArthur is not within an area of concern; however, directly on the harbor and adjacent to the subject property is an area where historic liquefaction has occurred. (California Department of Conservation, 1999b).

Liquefaction Potential

Liquefiable soils typically consist of cohesionless sands and silts that are loose to medium dense. To liquefy, these soils must be subjected to ground shaking of sufficient magnitude and duration. Given the generally dense to very dense and very stiff to hard nature of the soils underlying the sites, and the absence of a shallow groundwater table, the potential for significant liquefaction to occur is considered low (LAAFB, 2003).

Tsunamis and Inundation

LAAFB is approximately 2.4 miles from the Pacific Ocean at elevations of about 92 to 98 feet above MSL. Therefore, tsunamis (seismic sea waves) are not considered a significant hazard at LAAFB (LAAFB et al., 2003 Vol. I, Section 3.4.1.10). According to the County of Los Angeles Seismic Safety Element (County of Los Angeles, 1990) and the City of El Segundo General Plan (City of El Segundo, 1992), the site is not located downslope of any large bodies of water that could adversely affect the site in the event of earthquake-induced seiches (wave oscillations in an enclosed or semi-enclosed body of water) or dam failures (LAAFB et al., 2003, Vol. I, Section 3.4.1.10).

Methane

LAAFB is situated within a methane hazard (explosive) zone based on historic elevated levels of methane in soil gas. Areas where methane is found in soil gas at concentrations exceeding 40,000 ppm are considered to be within a methane hazard zone. Sampling conducted in 2004 in support of

ongoing construction projects at LAAFB identified methane concentrations between 22,000 ppm and 640,000 ppm (Earth Tech, 2004). Because LAAFB is known to have elevated methane levels, subsurface soil investigations and geotechnical investigations are typically conducted during construction projects and methane control methods are incorporated into the design of facilities to help reduce methane hazards. Management steps have been taken for the new medical center and the new physical fitness center on LAAFB to address impacts from methane. These include an impermeable barrier and methane gas monitors. (LAAFB et al., 2003, Vol. I, page 3.4.1-17 to 18). Methane hazards at Fort MacArthur have not been found to be documented.

Landslides

Landslides are a physiographic concern in Los Angeles County. However landslides greater than 5 acres have not occurred within a mile of LAAFB or Fort MacArthur (Brogue, 1999).

Subsidence

LAAFB is located within the Los Angeles basin, an area known for the extraction of fluids such as oil, gas, and water. The El Segundo oil fields are located approximately 0.75 mile southwest from LAAFB. The potential for subsidence due to fluid extraction is considered low because the site does not lie within an area actively being affected by the removal of fluids (oil or water) (URS, 2000).

3.13 Water Resources

The following sections describe the existing environment as it relates to surface water, stormwater, groundwater, and flood zone information.

3.13.1 Surface Water

There are no lakes, rivers, or streams that flow within, through, or near any property operated or controlled by LAAFB. Additionally, there are no ephemeral ponds or natural drainages that exist on LAAFB (Tetra Tech, Inc., 2001).

3.13.2 Storm Runoff

Topography and stormwater drainage patterns and characteristics at LAAFB and Fort MacArthur are described in Section 3.12.2. Best Management Practices (BMPs) are recommended to prevent storm water runoff from the construction activities.

3.13.3 Floodplains

EO 11988, Floodplain Management (Executive Order 11988, 1997), designates floodplains as the lowland and flat areas adjoining inland and coastal waters that have a 1-percent or greater chance of flooding in any given year. These areas are otherwise known as the 100-year flood areas. According to Federal Emergency Management Agency (FEMA) Flood Hazard Maps, all LAAFB properties lie outside of 100-year flood areas. However, a 500-year floodplain lies approximately 1.5 miles east of LAAFB and another lies approximately 1-mile southeast (Malcolm Pirnie, 2000, Volume I, Section 4.1.7.3.1). The eastern edge of Fort MacArthur is designated a 100-year flood zone. Further inland the designation changes to a 500-year flood zone (EDR, 1999a). The Flood Insurance Rate Maps (FIRM) of the City of Los Angeles indicate that LAAFB lies within Zone C or A (contained in channel), which are areas of minimal flooding (Zone C) or areas at base flood elevations (Zone A) (Malcolm Pirnie, 2000).

3.13.4 Groundwater

Groundwater occurrences in the region of LAAFB are divided into four general classes: (1) the Monterey and Pico Formations, which contain groundwater with high salinity; (2) the San Pedro Formation, which includes two productive potable aquifer systems, the Silverado and Lynwood Aquifers; (3) the Lakewood Formation, which contains the Gage and Gardena Aquifers; and (4) a shallow localized semiperched system in the basal section of the older dune sand (as reported in Tetra Tech, 2001). The direction of groundwater flow is from east to west toward the Pacific Ocean in the semiperched aquifer system and to the east in the lower Gage, Lynwood, and Silverado aquifers.

Hydrogeologic data from LAAFB wells indicate that the depth to groundwater is between 90 and 95 feet below ground surface, with a gradient sloping to the west/northwest. Three groundwater monitoring wells installed on LAAFB (MIW-102, -103, and -104) indicate that the average depth to groundwater at LAAFB is approximately 91 feet (URS, 2000). These groundwater monitoring wells are now closed.

There are no known, well-developed aquifer systems beneath Fort MacArthur. The water table was discovered during remedial investigations at Whites Point, south of the Pacific Heights and Pacific Crest Housing Areas (Malcolm Pirnie, Inc., 2000). The groundwater gradient is toward the west to the Pacific Ocean in this area.

LAAFB does not extract groundwater; overlying landowners in most areas of California may extract groundwater and put it to beneficial use. California does not have a permit process for regulation of groundwater use but in several basins groundwater use is subject to regulation. The Los Angeles Regional Water Quality Control Board (LARWQCB) has a Basin Plan designed to preserve and enhance water quality and protect the beneficial uses of all regional waters (LARWQCB, 1994).

3.13.5 Coastal Zone

The coastal zone, as delineated by the State of California, extends seaward 3 miles from the shore, including all offshore islands, and extends inland approximately 3,000 feet from the mean high tide line. Although federal lands are excluded from the coastal zone, the California Coastal Commission must review activities that affect the coastal zone for consistency with the Coastal Zone Management Act. The coastal zone is more than 11,000 feet from LAAFB; therefore, this area should not affect coastal zone resources unless activities result in significant surface water/liquid runoff or sedimentation. Fort MacArthur lies within the coastal zone. Plant and wildlife species that fall within this zone on LAAFB are discussed in Section 3.14..

3.14 Biological Resources

Biological resources addressed in this EA include vegetation, wildlife, threatened and endangered species, and wetlands.

3.14.1 Vegetation

LAAFB and Fort MacArthur are highly urbanized and landscaped. LAAFB is a developed site that consists primarily of paved areas and buildings. Fort MacArthur has more landscaping than LAAFB, but still no undisturbed areas. Most landscaping on LAAFB is not native to California.

Currently, no sensitive plant communities have been identified on LAAFB. However, southern

coastal bluff scrub lies immediately adjacent to the fence line, outside of the LAAFB boundary along the southern slope at Fort MacArthur. This plant community on the Palos Verdes Peninsula extends from Malaga Cove to Cabrillo Beach. Southern coastal bluff scrub in this area is threatened by development and disturbance associated with non-native plant species. Southern coastal bluff scrub occurs on cliffs and bluffs immediately near the coast, on rocky and very shallow, poorly developed soils. It is exposed to nearly constant winds and salt spray as well as to coastal fog drip. Shrubs and low-growing plants characterize the vegetation, some forming mats and others with succulent leaves. Species found in this community include encelia (*Encelia californica*), lemonadeberry (*Rhus integrifolia*), dudleyas, (*Dudleya* spp.), goldenbush (*Isocoma menziesii*), box thorn (*Lycium californicum*), big saltbush (*Atriplex lentiformis*), and prickly pears (*Opuntia* spp.).

There are several sensitive plants and plant species that have been recorded in the vicinity of LAAFB, including aphanisma (*Aphanisma blitiodes*), south coast saltscale (*Atriplex pacifica*), and bright green dudleya (*Dudleya virens*). However, there is no habitat for any of these plant species on LAAFB property, and none is expected to occur.

3.14.2 Wildlife

All LAAFB property was surveyed for potential habitat of wildlife species, including sensitive species, in 1999. The results of the survey are summarized in the Final Natural Resources Management Plan (Tetra Tech, 2001). LAAFB and Fort MacArthur were determined to be fully developed. As a result of the urban setting and associated lack of available habitat, few wildlife species occur on LAAFB. Various urban bird species forage in the trees/potted plants, and common rodents (e.g., mice) live on the base.

Landscaping provides the only habitat for wildlife species in developed areas of LAAFB and are expected to be used only by species tolerant of urban conditions such as the American crow (*Corvus brachyrhynchos*), rock dove or pigeon (*Columba livia*), white-crowned sparrow (*Zonotrichia leucophrys*), and California ground squirrel (*Spermophilus beecheyi*).

Bat species may use buildings and trees in urban environments for roosting and nesting; however, bat species are not likely to use LAAFB due to the absence of nearby surface water required for drinking and feeding. Eucalyptus and pine trees used for landscaping at LAAFB provide potential roosting habitat for sensitive monarch butterflies (*Danaus plexippus*); however, monarch butterflies are also not likely to use these trees due to the absence of nearby water sources.

3.14.3 Threatened or Endangered Species

No threatened or endangered species are known to be present at LAAFB (Tetra Tech, 2001). A search of federal and state databases for LAAFB yielded no officially designated wilderness areas, wildlife preserves, sanctuaries, refuges, wild and scenic rivers, or other officially designated natural areas that may provide habitat for threatened or endangered species within a 1-mile radius of LAAFB (EDR, 1999a). Nor did the search identify any threatened or endangered species or critical habitats with a 0.5-mile radius.

The nearest ecologically sensitive habitat to LAAFB that supports an endangered species is the El Segundo Blue Butterfly Wildlife Preserve, which is approximately 4 miles from the location of the proposed action. The Butterfly Preserve occupies approximately 1.96 acres adjacent to the Chevron Refinery and in the dune area under the flight path of LAX (City of El Segundo, 1992).

The search did not identify any threatened or endangered species or critical habitats within a 0.5 mile

radius of Fort MacArthur (EDR, 1999b).

3.14.4 Wetlands

Section 404 of the Clean Water Act (CWA) regulates actions that would impact waters and wetlands. The U.S. Army Corps of Engineers (U.S. ACE) and U.S. Environmental Protection Agency (U.S. EPA) have been given jurisdiction to implement Section 404, and all projects that would impact waters or wetlands require a permit from U.S. ACE. The U.S. ACE must coordinate with several federal agencies responsible for implementing the CWA. The U.S. ACE is responsible for determining jurisdictional boundaries of wetlands for regulatory and permitting purposes under Section 404 of the CWA.

The eastern portion of Fort MacArthur along the Los Angeles Harbor and north of 32nd Street is classified as a wetland per the 1994 National Wetlands Inventory (EDR, 1999a; 1999b). There are no other potential wetlands or waters of the United States on Fort MacArthur or on LAAFB. These areas are highly developed and any artificially constructed drainage would not qualify as jurisdictional waters of the United States.

3.15 Infrastructure/Utilities/Public Services

This section presents an overview of the utilities and public service systems. The Base Civil Engineering Department is tasked with overall utility management.

3.15.1 Potable Water

Potable water for LAAFB is supplied by the Southern California Water Company, the City of El Segundo, and the Los Angeles Department of Water and Power (LADWP). LAAFB purchases potable water from the City of El Segundo, which gets its water wholesale from the Metropolitan Water District of Southern California (MWD). Fort MacArthur purchases potable water from the LADWP. LAAFB owns and maintains the water distribution lines on LAAFB and Fort MacArthur. The LAAFB Bioenvironmental Engineering staff have historically reported no water quality problems (Malcolm Pirnie, 2000).

3.15.2 Wastewater

The City of El Segundo provides domestic wastewater (sewage) service to LAAFB. The sewage system discharges via gravity to the Los Angeles County Sanitation District sewage system. Domestic sewage is collected via underground, vitrified clay (clay tile) and cast iron pipelines. Wastewater utility lines are buried approximately 4 to 6 feet below grade and total approximately 7,438 linear feet. The wastewater infrastructure on LAAFB was installed in 1942 during construction of the Douglas Aircraft Company.

The Fort MacArthur domestic wastewater system discharges to the LADWP sewage system. Outflow is not metered. Wastewater is collected through underground pipelines ranging in diameter from 2 inches to 8 inches. The pipe construction material used at Fort MacArthur is vitrified clay and cast iron in the older sections and PVC in the newer housing area. There are approximately 18,000 linear feet of wastewater mains and lines on Fort MacArthur. The wastewater infrastructure in the housing area dates from 1982 and 1985. Portions of the wastewater infrastructure in older sections may be 50+ years old; however, significant utility upgrades were implemented around 1988.

3.15.3 Electrical Utility System

Southern California Edison Company (SCE) supplies both LAAFB and Fort MacArthur with electricity. SCE has one main 3,750 kilovolt-ampere (KVA) sub-station located north of Building 240 that it owns and maintains. There are two main electrical feeds to Fort MacArthur, one for the Base area and one associated with the housing area. Beyond the main SCE sub-station, ownership and maintenance responsibility of the electrical distribution system lies with LAAFB.

3.15.4 Natural Gas System

Southern California Gas Company (SCGC) supplies natural gas to both LAAFB and Fort MacArthur. , the main metered connection is located at the southern property line near El Segundo Boulevard. SCGC supplies natural gas to Fort MacArthur through two metered points of connection, one located at the northwest corner of the property and the other located at the corner of 34th Street and Pacific Avenue. Natural gas is distributed to points in both facilities through underground gas lines ranging in diameter from 0.75 to 4 inches. All natural gas piping is the property of the LAAFB.

3.15.6 Police and Fire Protection

LAAFB is served by the El Segundo Police Department and City of El Segundo Fire Station #2. Fort MacArthur is served by the Los Angeles Police Department, Harbor Community Police Station, San Pedro, and the Los Angeles City Fire Department Station #48 (South Grand Avenue, San Pedro). DoD police provide security within the borders of both LAAFB and Fort MacArthur."

4.0 ENVIRONMENTAL CONSEQUENCES

4.1 Introduction

The Air Force proposes to construct new hazardous waste and materials storage buildings at LAAFB and Fort MacArthur of LAAFB, California. To comply with CEQ regulations (40 CFR 1502.1[d]), this EA also analyzes the No Action Alternative of not constructing new hazardous waste/material storage facilities at LAAFB at this time. Details and ramifications of the Proposed Action and the No Action Alternative are described in the following subsections.

This section describes the effects that the Proposed Action and the No Action Alternative (See Section 4.17) will have on the existing conditions described in Section 3. The effects or impacts of the alternatives can be beneficial or adverse and short-term or long-term, as discussed in the following sections.

CEQ *Regulations for Implementing the Procedural Provisions of NEPA* (40 CFR 1500-1508), and *Environmental Impact Analysis Process* (32 CFR Part 989, et seq., formerly known as *AFI 32-7061*) require an EA to discuss impacts in proportion to their significance and to present only sufficient discussion of less significant issues to show why more study is not warranted. The analysis in this EA considers the current conditions of the affected environment and compares those conditions with what might occur should any of the alternatives be implemented.

4.2 Land Use

On LAAFB, the proposed building will be located a few hundred feet away from the current hazardous waste and hazardous materials storage buildings. At Fort MacArthur, the proposed building will replace Building 78, which will be demolished. Therefore, the land use at both sites will remain the same. The land use in LAAFB and Fort MacArthur will not be affected by the Proposed Action as the general characteristics of the land will stay the same. The Proposed Action will not infringe upon the existing or future land use activities within the surrounding cities, nor will it cause inconsistencies or impacts to the land use plans of the surrounding communities. Installation of the proposed buildings will be compatible with the surrounding land uses. There are no changes in land management and ownership. No adverse impacts to land use are expected from the Proposed Action.

4.3 Aesthetics

The construction of the Proposed Action is not expected to significantly impact the aesthetic resources at LAAFB. In fact, a beneficial impact is likely since the relatively unsightly metal sheds will be removed and replaced with buildings that fit the current architectural style of the surrounding area.

4.4 Cultural Resources

The Proposed Action will directly affect one existing building on the LAAFB. At Fort MacArthur, historic Building 78 – an original wagon shed now used as a maintenance shop, will be demolished and replaced with the proposed new building which is only slightly larger in size than the current building. After evaluation, Building 78 was deemed “not eligible” for nomination to the NRHP

(Chandler et al., 2001). In addition, demolition of Building 78, as well as construction of the new building on the same site, may disturb currently unknown, subsurface archaeological remains.

Indirect effects of the Proposed Action at the Building 78 site consist of visual impacts. The removal of one historic building from a cluster of historic and non-historic buildings and the construction of a new building in its place will change the viewscape and affect the integrity of the setting of those surrounding buildings. However, because this building is in a somewhat more isolated corner of Fort MacArthur, this impact is not significant and will be intentionally mitigated as the new building will be designed with the same general architecture and color as the existing and surrounding buildings.

The Proposed Action includes constructing a building identical to that proposed for Fort MacArthur on LAAFB. The construction of this building on LAAFB will not disturb any existing buildings of historic age.

Any ground disturbing actions at Fort MacArthur or LAAFB may reveal and/or disturb archaeological remains. Upon discovery of archeological or cultural artifacts, all field work will stop and an archaeologist will be required to assess the site for further action

4.5 Socioeconomics

Socioeconomics focuses on the general features of the local population and economy that could be affected by the Proposed Action.

Construction activities for the Proposed Action will be beneficial to the local socioeconomic conditions. Labor and materials will be purchased from the local community, increasing local revenue, a minor short-term benefit.

After construction, no new employees will be necessary for operation of the buildings. Implementation of the Proposed Action will not create or eliminate jobs, will not cause the local or regional area to experience any economic growth or loss, will not change population and housing in the area, and will not change the demographic profile of the local or regional area. In the absence of other independent activities at LAAFB, socioeconomic conditions will return to the existing conditions once project construction is completed. Therefore, no long-term impacts to the socioeconomic environment will result from the Proposed Action.

4.6 Environmental Justice

No environmental impacts are anticipated as a result of the Proposed Action. The project will result in ground disturbance of less than one acre of land at each LAAFB and Fort MacArthur, located entirely within the boundaries of LAAFB. The ground disturbance is small because the site is served by a paved road and utility mains. Surveys (LAAFB, 2001) have documented that there are no wetlands, threatened or endangered species, or cultural resources present in the project area. Because of the small size of the project area, the minimal amount of heavy equipment needed for construction, and the distance to the nearest residential area, noise and air emissions (primarily PM10 as fugitive dust) will not impact any residents or workers. If any unanticipated noise or air emissions result from the Proposed Action, these effects would be short-term and temporary. Standard construction practices will be implemented to minimize dust. There are no surface water bodies near the site. Further explanation of the determination that no adverse environmental impacts will result from implementation of the Proposed Action is found in other sections of Chapter 4.

There is no expected change in the demographic profile of any minority group within the region. No minority or low-income population will carry an undue burden of environmental risk as a result of the proposed project. Because the Proposed Action and the Alternatives take place within the boundaries of existing military facilities, minority or low-income populations will not be significantly affected by implementation of the Proposed Action. Therefore, the proposed project is not expected to pose adverse health or environmental impacts to residents of adjacent neighborhoods, regardless of income or ethnicity. Thus, the proposed project is consistent with the objectives of Executive Order 12898 and environmental justice was eliminated from further analysis in this EA.

4.7 Traffic

Implementation of the Proposed Action is not expected to affect local transportation resources. During construction, there will be up to 20 employees working on the building, an insignificant increase in traffic, which should not significantly impact the local and regional road networks. There will be no significant on-base traffic delays or disruptions during construction as the buildings are located away from the gates and are not on primary routes. It is expected that there will be no change in LOS levels of affected routes during construction. If there are any traffic delays or disruption during construction, they would be minimal and of short duration. Construction traffic issues at LAAFB were addressed in the EIS/EIR for the SAMS project (LAAFB et. al., 2003).

There will not be an increase in the number of employees (post construction) as a result of the Proposed Action. There will be no change in traffic patterns as a result of the Proposed Action because there is essentially no change in location. The proposed storage building in on LAAFB will be located north of the current location of the storage sheds. As the proposed building at Fort MacArthur will replace the building where the materials are currently stored, there will be no change in location. As a result of the proposed project, there will be no change in the transportation patterns of delivering and moving hazardous materials and wastes; the proposed replacement of buildings will have no effect on transportation patterns and times. Changing transportation patterns is not part of the Proposed Action.

4.8 Airspace Management

Airspace management will not be affected by the Proposed Action. The Proposed Action does not involve aircraft or airspace modifications. No part of the action employs or influences airspace operations or air traffic management; all action elements will occur on the ground and will not impact either the management or use of airspace. No further analysis is warranted.

4.9 Noise

Noise is often defined as any sound that is undesirable because it interferes with communication, is intense enough to damage hearing, diminishes the quality of the environment, or is otherwise annoying. Response to noise varies by the type and characteristics of the noise source, distance from the source, receptor sensitivity, and time of day.

Currently, vehicular traffic is the dominant source of noise at both sites. The Proposed Action will have no impact, neither increasing nor decreasing the number, type, or quantity of traffic to the site; therefore, there will be no change in traffic-related noise. No new noise sources, mobile or stationary, will be introduced to new areas as a result of the Proposed Action. No long-term

exposure to additional noise will occur as a result of implementing the Proposed Action. Noise generated from activities associated with the Proposed Action will not change the local noise environment.

Demolition and construction activities of the Proposed Action will temporarily increase noise levels in the immediately surrounding area. These activities will only occur during daylight hours and only intermittently over a 3- to 4-month construction period. Any noise generated during demolition and construction activities will be limited to areas immediately adjacent to the construction sites. The added noise impact from construction activities is not expected to be a significant increase over current noise levels. General public residential areas are not located near the Proposed Action locations; therefore, no noise impacts to residential areas are expected.

4.10 Air Quality

4.10.1 Air Quality Impact Criteria

The SCAQMD has established specific criteria for determining whether the potential air quality impacts of a project are significant. These criteria are presented in the SCAQMD's California Environmental Quality Act (CEQA) Air Quality Handbook, April 1993 (Table 3-3). These criteria include significant emissions thresholds, compliance with state and national air quality standards, and consistency with the current AQMP. These thresholds are listed in Table 4-1.

Table 4-1. SCAQMD AIR QUALITY SIGNIFICANCE THRESHOLDS

Mass Daily Thresholds		
Pollutant	Construction	Operation
NOx	100 lbs/day	55 lbs/day
VOC	75 lbs/day	55 lbs/day
PM ₁₀	150 lbs/day	150 lbs/day
SOx	150 lbs/day	150 lbs/day
CO	550 lbs/day	550 lbs/day
Lead	3 lbs/day	3 lbs/day
Toxic Air Contaminants (TACs) and Odor Thresholds		
TACs (including carcinogens and non-carcinogens)	Maximum Incremental Cancer Risk ≥ 10 in 1 million Hazard Index ≥ 1.0 (project increment) Hazard Index ≥ 3.0 (facility-wide)	
Odor	Project creates an odor nuisance pursuant to SCAQMD Rule 402	
Ambient Air Quality for Criteria Pollutants ^a		
NO ₂ 1-hour average annual average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 0.25 ppm (state) 0.053 ppm (federal)	
PM ₁₀ 24-hour average annual geometric average annual arithmetic mean	10.4 µg/m ³ (recommended for construction) ^b 2.5 µg/m ³ (operation) 1.0 µg/m ³ 20 µg/m ³	

Sulfate 24-hour average	1 $\mu\text{g}/\text{m}^3$
CO 1-hour average 8-hour average	SCAQMD is in attainment; project is significant if it causes or contributes to an exceedance of the following attainment standards: 20 ppm (state) 9.0 ppm (state/federal)

^a Ambient air quality thresholds for criteria pollutants based on SCAQMD Rule 1303, Table A-2 unless otherwise stated.

^b Ambient air quality threshold based on SCAQMD Rule 403.

KEY: lbs/day = pounds per day ppm = parts per million $\mu\text{g}/\text{m}^3$ = microgram per cubic meter \geq greater than or equal to

CO = carbon monoxide
 NA = not applicable
 N/A = not available
 NO_x = nitrogen oxides
 PM₁₀ = particulate matter equal to or less than 10 microns in diameter
 SO_x = sulfur oxides
 VOC = volatile organic compound

Projects in the SCAB with construction-related emissions that exceed the thresholds listed in Table 4-1 are considered significant by the SCAQMD.

4.10.2 Short Term Impacts from Construction

Construction activities will produce some short-term emissions of regulated pollutants. However, these emissions will only occur during the construction period. These emissions will include particulate matter from fugitive dust and criteria pollutants from fuel-fired equipment. However, these emissions and related impacts will be temporary and less than significant in mass, concentration, and duration. Furthermore, because the number of vehicles and duration of construction required to perform the work is limited, emissions are not anticipated to cause an exceedance of NAAQS or CAAQS in the vicinity of the project. For subsurface construction work, the existing pavement at both sites will be cut up, removed, and replaced with a concrete foundation, with excavation to about 3 feet. There will be no soil import, no soil backfill activities, and no driving on unpaved roads, the type of activities that generate the largest amount of dust.

SCAQMD Rule 403, *Fugitive Dust*, applies to construction activities with the potential for construction on unpaved areas. Rule 403 requires implementing measures to prevent fugitive particulate matter from becoming airborne. Although the size of unpaved areas and disturbed soils would be minimal because the sites are already level and flat, the measures from Rule 403 will be implemented during the construction process, as appropriate.

SCAQMD's Localized Significance Construction Scenarios emissions model was used to prepare rough estimates of construction emissions as presented in Table 4-2. This scenario is based on the estimated scenario of what would occur at Fort MacArthur which is worst-case compared to LAAFB because there is building demolition involved at Fort MacArthur whereas there would not be at LAAFB. The totals for the various phases cannot be added together because they will occur at different periods, so one must compare only each individual construction phase to the impact thresholds to assess impact.

Table 4-2. Total Emissions Per Construction Phase (lb/day):

Construction Phase	CO	NOx	PM10
Demolition	8.3	16.5	1.4
Site Preparation	8.0	19.9	1.6
Grading	13.6	34.0	2.1
Building	6.5	14.6	1.3
Arch Coating and Paving	8.8	17.6	1.5
Impact Thresholds	550	100	150

Emissions estimated using SCAQMD's Localized Significance Construction Scenarios emissions model, using the construction scenario assumptions listed in Section 2.3 of this EA.

As shown in Table 4-2, none of the daily emissions from the various construction phases exceed the impact thresholds. The model does not calculate VOC, SOx, and lead, but it is expected that emissions of those pollutants will be at even lower levels than the pollutants presented due to the nature of the fuel and activities.

4.10.3 Long-Term Impacts

All chemicals stored in the buildings will be in sealed containers, so no emissions of chemicals will occur. Because the Proposed Action will not increase traffic, change traffic patterns, or change personnel, ongoing vehicle emissions from the project will not be affected. Implementing the Proposed Action will not change current or future air quality because there would be no new sources of air emissions and no increase in vehicle traffic. Therefore, there will be no operational air quality impacts associated with the Proposed Action.

4.10.4 Conformity Review

As a federal facility in a designated "nonattainment" area for ozone, any actions at LAAFB must undergo review in accordance with the Federal Conformity Rule (40 CFR 93.153). Estimated emissions from construction were presented in Section 4.10.2. No change in long term, operational emissions is expected. The emissions from the Proposed Action will be far below the *de minimis* levels in the Conformity Rule (i.e., 100 tons per year for VOCs and 100 tons per year for NOx). As a result, LAAFB is not required to prepare a full conformity determination for the Proposed Action. Emissions from Proposed Actions are "presumed to conform" based on emissions levels that are considered insignificant in the context of overall regional emissions. An air conformity assessment is provided in the Appendix to this EA.

4.11 Hazardous Materials and Waste

4.11.1 Demolition and Construction

The Proposed Action includes demolition of Building 78 at Fort MacArthur. ACM and LBP are likely present in this building. ACM must be removed from the building before any activity begins that would break up, dislodge, or similarly disturb the materials or preclude access to the material for subsequent removal. A complete ACM and LBP survey will be performed before demolition of this building. Should ACM and LBP be present in the building, ACM and LBP will be abated and disposed of in accordance with LAAFB's Asbestos Management Plan, which was designed to

comply with applicable federal, state, and local (SCAQMD) regulations. See Section 3.10.4 for a more detailed discussion of asbestos management requirements.

Although there are several sites within LAAFB with known past or present contamination, the EBS reports described in Section 3.10.8 have not identified the two Proposed Action locations as contaminated sites – no known contamination exists at these sites. If any contaminated soil is encountered, it would be managed consistent with local, state, and federal regulations. Any ongoing clean-up and remediation actions currently in progress at LAAFB will not be affected by the Proposed Action.

During construction of the facility, any hazardous materials used, such as fuels, solvents, and paints, will be responsibly managed according to the LAAFB Hazardous Materials Management Plan. During the proposed construction activities, no solid wastes will be generated except for minor amounts of construction debris that would be managed and disposed of as uncontaminated trash. It is possible that equipment failure or a spill of fuel, lubricants, or construction-related chemicals could generate solid or hazardous wastes. If any hazardous wastes are generated, they would be managed per LAAFB requirements, which meet federal, state, and Air Force requirements. The construction contractor will coordinate directly with the LAAFB Environmental Engineering Office regarding all hazardous wastes generated during construction of the Proposed Action.

4.11.2 Long Term Operation

Hazardous materials and hazardous waste impacts are considered adverse if the storage, use, transportation, or disposal of these substances substantially increases the human health risk or environmental exposure. An increase in the quantity or toxicity of hazardous materials and/or hazardous waste handled by a facility may also signify a potentially adverse effect, especially if a facility was not equipped to handle the new waste streams.

Long term operation of the proposed buildings will not introduce or use any new hazardous materials nor will it generate any new hazardous waste – no change to hazardous materials usage and hazardous waste generation will result from moving these materials from the current sheds to inside the proposed buildings. Hazardous materials are stored in these buildings but are used in other locations at LAAFB; likewise, the hazardous waste is generated at other locations within LAAFB, and the sealed containers of the waste are temporarily stored in these buildings. Hazardous materials and waste will not change at LAAFB as a result of the Proposed Action. Because no waste streams will be created or increased, and hazardous materials will not change at the base, no adverse impacts to this resource are expected.

The hazardous wastes will be handled and stored in the buildings in accordance with the storage requirements of California and federal hazardous waste regulations. These regulations require the generator to characterize hazardous wastes with analyses or process knowledge. Hazardous wastes are eventually labeled, transported, treated, and disposed in accordance with federal and state regulations.

4.12 Safety and Occupational Health

The typical health and safety hazards associated with construction sites will be present for the Proposed Action. There are no specific aspects of demolition or construction operations that will create any unique or extraordinary safety issues. All applicable OSHA regulations and guidelines will be followed during construction to minimize potential risk to workers. The general public will

be kept at a safe distance from construction areas to minimize the potential risk to non-workers. During demolition of the existing building at Fort MacArthur, safe asbestos and LBP removal guidelines will be followed to help prevent release of friable asbestos.

The Proposed Action has no aspects that will adversely alter the safety conditions, and it will not create any new long-term health and safety hazards or any unique or unusual safety issues. Day-to-day operations and maintenance activities conducted at LAAFB are performed in accordance with Air Force safety regulations, Air Force Technical Orders, and standards prescribed by Air Force Occupational Safety and Health requirements. Therefore, no long-term health and safety concerns should be associated with the Proposed Action. In fact, beneficial health and safety impacts are intended to occur from the Proposed Action by making handling and storage of hazardous materials and waste safer with easier access.

4.13 Topography, Geology, Soils, and Natural Hazards

The proposed locations for the new buildings are currently flat and covered with pavement – there is no soil exposure. For subsurface construction work, the existing pavement at both sites will be cut up, removed, and replaced with a concrete foundation, with excavation to about 3 feet. The area of disturbance would be minimal (less than 3,000 square feet). This soil disturbance will be temporary and short-term in duration, and will only impact surficial soils during the demolition and construction processes. The Proposed Action will have no impact with respect to the topography, soil, and geology of the project area, as the project site is already leveled, flat, and paved from previously existing development and it will remain unchanged relative to baseline conditions.

LAAFB is situated within a methane hazard (explosive) zone based on historic elevated levels of methane in soil gas. Before any site work, a project-specific subsurface soil/geotechnical investigation will be performed at both sites to determine the presence of methane underlying the project site. This investigation will determine whether the methane is of a hazardous concentration and whether installation of a passive methane gas control system or other measures are needed to vent methane to prevent it from accumulating beneath the building and inside the building. As appropriate, methane control methods as specified in the Los Angeles Department of Building and Safety, Methane Mitigation Standard would be implemented to reduce methane impacts to less than significant.

4.14 Water Resources

The Proposed Action will not increase water requirements nor affect the existing on-site wells; therefore, there will be no significant impact on water resources.

4.14.1 Surface Water

Currently both sites are flat, graded, and paved, with no surface water within 500 feet. No perennial or ephemeral creeks traverse the project site. Because the sites are already paved and/or covered by the current buildings, there will not be a greater volume of stormwater produced as a result of an increase in impervious surfaces. Stormwater volume will remain the same as current conditions. For these reasons, the Proposed Action will not cause a long-term impact on surface water quality. The Proposed Action may in fact contribute a beneficial impact by moving hazardous materials and wastes inside the proposed buildings, which will have the extra containment and spill control

features. The features in the proposed buildings will minimize the potential for a spill while materials are handled or stored, which means there is less potential for a spill to reach a nearby stormdrain.

The temporary demolition and construction activities associated with the Proposed Action may increase the potential for debris to be washed into nearby stormdrains and for oil from construction equipment to be picked up with stormwater runoff. To minimize the potential for debris and oil to be washed into the stormdrain during storm events, the proposed demolition and construction activities must follow the stormwater BMPs. Because the disturbed area would be less than one acre at each site, a State of California Stormwater General Permit for Construction Activity is not required.

4.14.2 Floodplains

Both proposed construction sites at LAAFB and Fort MacArthur lie outside of 100-year flood areas. However, LAAFB lies about one mile away from a 500-year floodplain, and Fort MacArthur is within a 500-year floodplain. The Proposed Action will not change the existing boundaries of the sites or result in the placement of additional features into a designated floodplain (existing facilities will be replaced with new facilities). Implementation of the Proposed Action will not impact existing site or regional floodplain designations or regional floodplain management activities.

4.14.3 Groundwater

The proposed buildings will be constructed entirely above the existing ground surface. The soil disturbance depth due to construction will be well above groundwater levels and no contact with groundwater will exist. No releases to groundwater from operation of the buildings are expected to occur. Therefore, no groundwater impacts are expected from the demolition and construction activities or from operation of the proposed buildings.

4.14.4 Coastal Zone

LAAFB is well away (two miles) from a coastal zone. Fort MacArthur lies within the coastal zone. The Proposed Action will not create significant surface water/liquid runoff or sedimentation, nor any other runoff or surface water or vegetative changes that would affect the coastal zone.

4.14.5 Water Rights

Surface water is not present at LAAFB or Fort MacArthur, and LAAFB does not extract groundwater. The Proposed Action will not affect water resources and water rights.

4.15 Biological Resources

The Proposed Action will have no impact on biological resources, as described in more detail in the following sections.

4.15.1 Vegetation

The proposed project sites are paved with no native or landscaped vegetation, so there is no direct impact to on-site vegetation. No aspect of the Proposed Action will cause any impact to off-site vegetated areas. The new buildings may have some minor landscaping, which will provide visual and vegetative improvements to the area.

4.15.2 Wildlife

Both sites at LAAFB are disturbed areas with limited areas of natural habitat. There is no significant habitat identified for protected wildlife. The Proposed Action will not affect wildlife, wildlife habitats, food sources, and species. Therefore, no adverse impacts to wildlife are anticipated.

4.15.3 Threatened and Endangered Species

There are no known threatened or endangered species inhabiting LAAFB and the Proposed Action will not affect any threatened or endangered species.

4.15.4 Wetlands

The proposed project sites are not in wetlands and there are no wetlands located in close proximity to the proposed construction area. Therefore, no adverse impacts to wetlands are anticipated from the Proposed Action.

4.16 Infrastructure/Utilities/Public Services

The Proposed Action will tie into existing utilities. Utility trenching for electric, telephone, and water may be necessary for the building at LAAFB. The absence of natural gas lines and other utilities in the vicinity of the proposed sites and utility connections will be confirmed before construction. No new construction of utility lines will be necessary to support the Proposed Action at Fort MacArthur. The proposed buildings are to include restrooms, the only areas of the buildings requiring water and domestic wastewater services for operation. It is not anticipated that future utility conditions and public services at LAAFB will be affected as a result of operating the proposed buildings.

4.17 Impacts from No Action Alternative

Under the No-Action Alternative, the hazardous materials and wastes will remain in their temporary sheds, which is neither the safest nor most environmentally preferred alternative. Storing hazardous materials and wastes in a permanent, dedicated building designed with spill prevention and spill control measures (the Proposed Action) would be environmentally preferable.

- Land Use – Under the No Action Alternative, the current hazardous materials and waste storage buildings and current land use will remain the same with no land use impact. However, it is possible that the temporary facilities at LAAFB may be moved again to make way for other activities. Having these white portable sheds in a parking lot adjacent to the Physical Fitness Center may have an adverse impact on aesthetics and also be an incompatible land use.
- Cultural Resources – In the event that no action is taken, at LAAFB no ground disturbance due to new construction will take place where the proposed new building was to stand. Building 78 at Fort MacArthur will remain standing and will continue to be used for the current uses. Subsurface deposits beneath and around the building will not be disturbed by new building construction. Temporary waste containers will continue to be stored next to Building 78 and possibly deteriorate if they are not replaced,

- **Socioeconomics** – Under the No Action Alternative, there will be no construction activities, and the short-term benefit of revenue to local construction companies, equipment suppliers, and work force that would have been generated through the construction of the new facility will not be realized. This is a minor negative socioeconomic impact of the No Action Alternative. Otherwise, there will be no long-term socioeconomic impact from the No Action Alternative as there will be no changes to personnel and no changes to socioeconomics, and population.
- **Environmental Justice** – The No Action Alternative will not change existing conditions, and minority or low-income groups will not be disproportionately affected by this alternative. All the points delineated in Section 4.5 are also true for the No Action Alternative; therefore, the No Action Alternative will not affect environmental justice.
- **Traffic** – For the No Action Alternative, transportation will remain unchanged and consistent with existing conditions. The Proposed Action will also result in no changes in traffic conditions, so this impact will be the same for either action.
- **Air Quality** – There would be no short term air quality impacts (construction emissions) related to the No Action Alternative. Under the No Action Alternative, air emissions from current operations will stay the same, which is no impact.
- **Hazardous Materials and Wastes** – Under the No Action Alternative, the proposed new hazardous materials and waste storage facilities will not be constructed. The existing temporary facilities will continue to be utilized, which is an adverse impact because these facilities are undersized and deteriorating. Under the No Action Alternative, there will be no change to hazardous materials and waste storage.
- **Noise** – Under the No Action Alternative, noise levels will not change from the current levels. The No Action Alternative consists of no construction activities, which results in no noise impacts from this alternative. Therefore, no adverse impacts associated with noise are anticipated from the No Action Alternative. However, as discussed in Section 4.8, under the Proposed Action, the timing and volume of construction noise is not expected to significantly increase the existing noise environment, which results in no adverse impact as well. Noise levels will remain unchanged under either alternative.
- **Safety and Occupational Health** – Under the No Action Alternative, no construction activities will take place; therefore, no potential impacts to health and safety will arise. Personnel handling hazardous waste and hazardous materials in the currently undersized storage facilities will continue to work under these conditions which present potential safety impacts.
- **Topography, Geology, Soils, and Natural Hazards** – Under the No Action Alternative, the proposed demolition and construction activities will not occur, so there will be no impacts to topography, soils, and geology.
- **Water Resources** – There are no current discharges to surface water from the operations of the current hazardous waste and hazardous materials storage sheds. The No Action Alternative will result in no changes and no impacts to surface water. However, there is greater risk of spills reaching the stormdrain if the materials are left in the temporary outdoor

storage sheds. There are currently no impacts to groundwater or other water resources, and this would remain unchanged.

- Biological Resources – The No Action Alternative consists of no construction activities and no changes in operation resulting in no impacts to biological resources.
- Infrastructure/Utilities/Public Services – There will be no change to infrastructure, utilities, and public services from the No Action Alternative.

4.18 Cumulative Effects

"Cumulative impact" is defined in CEQ's NEPA regulations as the "impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions ..." (40 CFR 1508.7). CEQ interprets this regulation as referring only to the cumulative impact of the direct and indirect effects of the Proposed Action and its alternatives when added to the aggregate effects of past, present, and reasonably foreseeable future actions.

Cumulative effects are most likely to arise when a relationship or synergism exists between a Proposed Action and other actions expected to occur in a similar location or during a similar time period. Actions overlapping with, or in close proximity to, the Proposed Action would be expected to have more potential for a relationship than actions that may be geographically separated. Similarly, actions that coincide, even partially, in time will tend to offer a higher potential for cumulative effects.

LAAFB is in the process of significant modifications and upgrades at LAAFB as part of the Land Conveyance and Seismic Upgrade Project, also called the Systems Acquisition Management Support (SAMS) project. The SAMS project included trading LAAFB property (Area A, Lawndale Annex, and a property in Sun Valley) to a private real estate developer in exchange for the design and construction of new, seismically-secure Air Force facilities in LAAFB.

The Proposed Action at LAAFB that is addressed in this EA is not part of SAMS, but is a result of it, as the previous storage building was demolished for SAMS and hazardous waste storage was moved into the portable sheds. The Proposed Action will provide a net environmental benefit by moving hazardous materials and wastes out of the more risky portable outdoor units to secure permanent buildings. There will be no potentially significant environmental effects as a result of this action, as discussed in this EA, and it will not have a significant contribution to the creation of impacts from other projects.

Significant modification is occurring at Fort MacArthur with major renovation of housing units. The Proposed Action at Fort MacArthur is not a result or a part of these renovation activities. It is an independent activity to improve hazardous material and waste storage. As described in this EA, the Proposed Action does not create any potentially significant environmental effects and will not have a significant contribution to the creation of impacts from other projects.

Negligible air emissions from construction activities will occur and are only expected to contribute a very small percentage of the total air emissions at LAAFB and the region. The emissions from the Proposed Action will be so small in volume and so short in duration that the emissions produced will not provide a significant contribution to cumulative air quality deterioration in the region.

There are no other past, present, or reasonably foreseeable projects or actions that the Proposed Action might interact with that would create an effect on the environment. As discussed above, there are other past, present, or reasonably foreseeable actions on LAAFB, but none that would interact with the Proposed Action in creating significant cumulative effects. The Proposed Action would not pose any potentially significant impacts either alone or in increment with other projects at LAAFB.

4.19 Irreversible and Irretrievable Commitment of Resources

NEPA requires environmental analysis to include identification of any irreversible and irretrievable commitment of resources that will be involved in the Proposed Action or alternatives should they be implemented. Irreversible and irretrievable resource commitments are related to the use of nonrenewable resources and the effects this use could have on future generations. Irreversible effects primarily result from the use or destruction of a specific resource (e.g., energy and minerals) that cannot be replaced within a reasonable time frame. Irretrievable resource commitments involve the loss in value of an affected resource that cannot be restored as a result of the action (e.g., extinction of a threatened or endangered species or the disturbance of a cultural resource).

The Proposed Action will require the use of fossil fuels in construction vehicles and in contractor vehicles. These non-renewable resources will be irretrievably lost; however, the effect is minor and not significant. The Proposed Action will not increase consumption of these resources in the long-term.

Materials used in the construction of the new buildings (i.e., wood, plastic) will be committed under the Proposed Action. These non-renewable resources will be irretrievably lost; however, the effect is minor and not significant.

For the Proposed Action, most resource commitments will be neither irreversible nor irretrievable. Most environmental consequences will be short-term and temporary, such as air emissions from demolition and construction operations. The impacts from the Proposed Action are less than significant, temporary, and include some beneficial impacts.

4.20 Unavoidable Adverse Environmental Impacts

The discussion of potential environmental impacts presented in Section 4.3 indicates that neither the Proposed Action nor the No Action Alternative will create unavoidable adverse environmental impacts.

4.21 Compatibility with the Objectives of Federal, Regional, State, and Local Land Use Plans, Policies, and Controls

LAAFB is an active military facility. The current mission of LAAFB is to “deliver unrivaled space, missile, and information capabilities and systems to the joint warfighter, and our nation” with a goal to “be the recognized center of technical excellence, and the product center of choice for innovative, affordable, operationally effective space systems.” The Proposed Action does not create a land use change, and it does not interfere with this mission and goal or with any other land use plans at LAAFB and the surrounding communities. The Proposed Action is also compatible with LAAFB plans and programs.

4.22 Relationship Between the Short-Term Use of the Environment and Long-Term Productivity

The Proposed Action is necessary to provide a safe and permanent location for storage of hazardous materials and wastes. Therefore, implementing the Proposed Action will have a positive impact on the long-term productivity of LAAFB.

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6.0 LIST OF PREPARERS

LAAFB

Luay Quatish, EA Project Manager (former), Environmental Operations Engineer, LAAFB - 61 CELS/CELEV

Michael Szekely, Environmental Engineering Chief (former), LAAFB - 61 CELS/CELEV

Ivar Sohn, Environmental Compliance Manager, LAAFB - 61 CELS/CELEV

Claude Youssafzadeh, EA Project Manager, Environmental Operations Engineer, LAAFB - 61 CELS/CELEV

MACTEC Engineering and Consulting, Inc.

Preparers	Qualifications	Primary Responsibility
William Reich, CF	B.S. Forestry, 20 years experience in all aspects of natural resource management and environmental document preparation.	Project Principal
Ron Leiken, QEP, REA	B.S. Natural Resource Management; 18 years experience as Environmental Scientist with various technical writing responsibilities.	Project Manager and Primary Author of all sections except Cultural Resources
Lynn Furnis	M.S. Anthropology; 28 years experience in cultural resource management.	Cultural Resources
Carol Wanta	B.A. English Literature; 16 years writing experience with 5 years in environmental technical writing and editing.	Technical Editing
Donna Robertson	M.S. Wildlife and Fisheries Sciences; 15 years experience in ecological studies and NEPA compliance	Quality Assurance Review
William Kitch , PE, Ph.D.	Ph.D. Civil Engineering; 22 years experience in facilities operations, maintenance, and engineering	Client Coordination and Point of Contact; Project Oversight

FIGURES



Environmental Assessment of Construction of New Hazardous Materials/Waste Storage Buildings at LAAFB

Figure 1. LAAFB Regional Vicinity Map.





Environmental Assessment of Construction of New Hazardous Materials/Waste Storage Buildings at LAAFB

Figure 2. Area B Location Map.

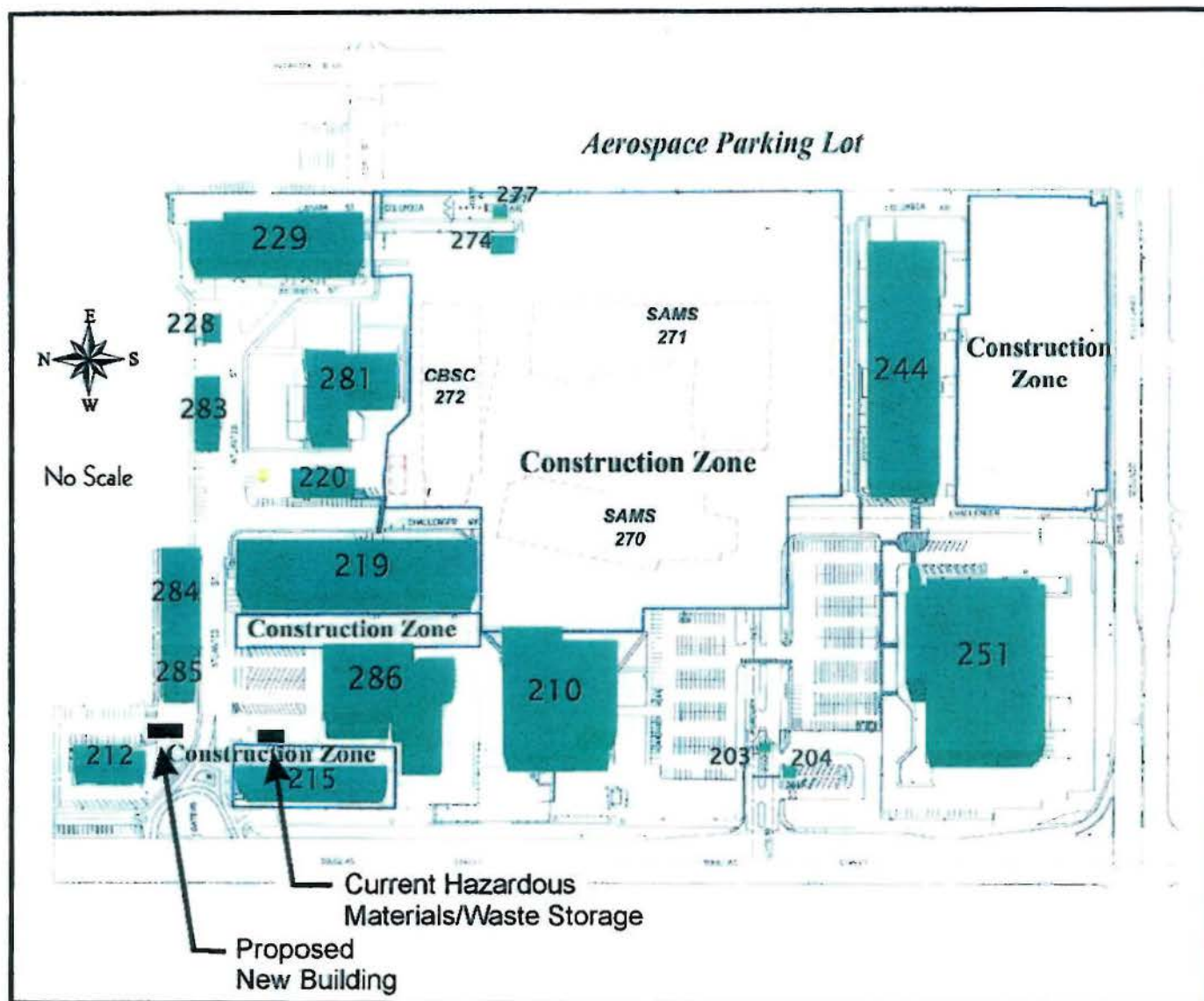




Environmental Assessment of Construction of New Hazardous Materials/Waste Storage Buildings at LAAFB



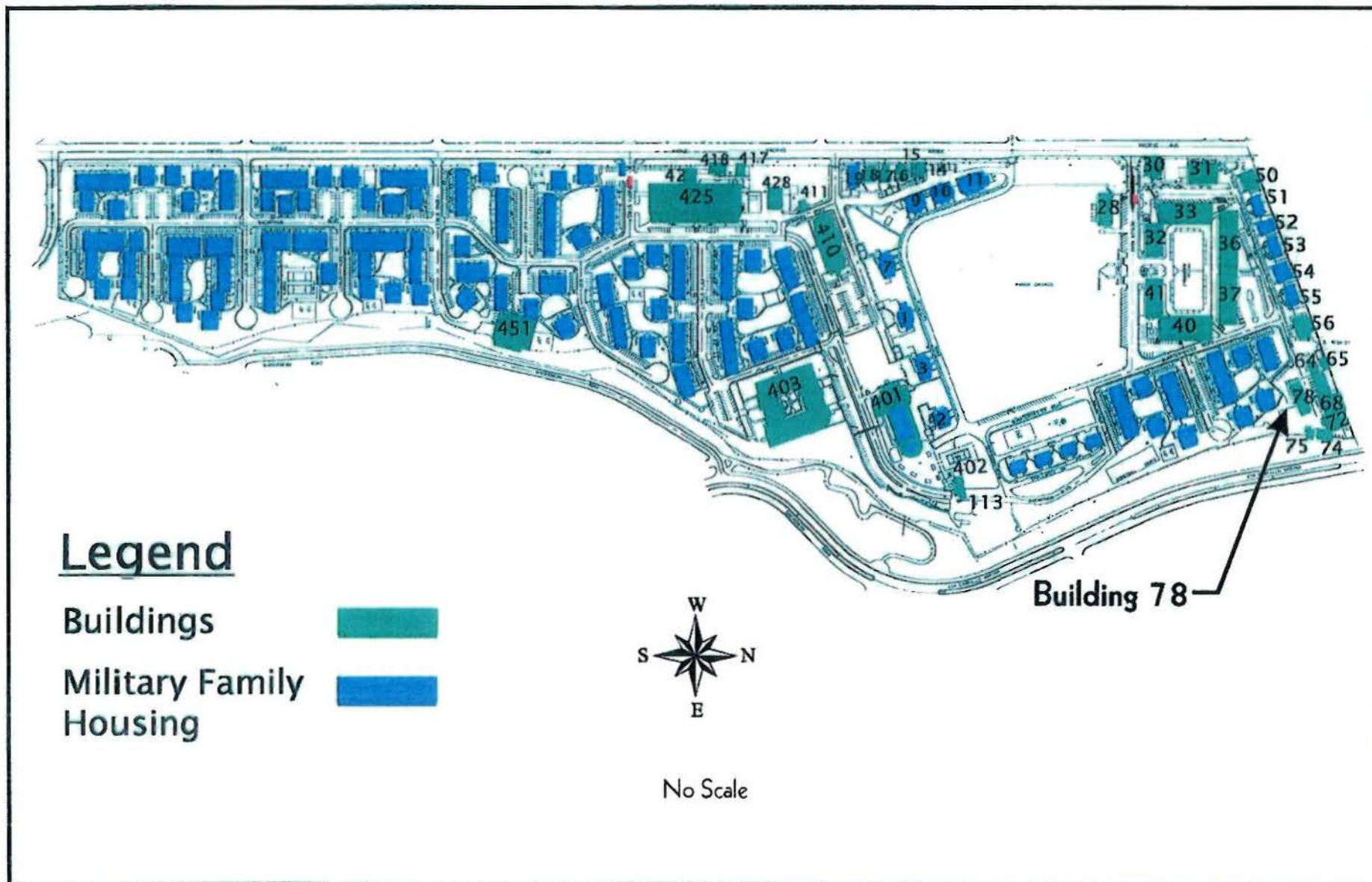
Figure 3. Fort MacArthur Location Map.



Environmental Assessment of Construction of New Hazardous Materials/Waste Storage Buildings at LAAFB

Figure 4. Area B Site Map.





Environmental Assessment of Construction of New Hazardous Materials/Waste Storage Buildings at LAAFB

Figure 5. Fort MacArthur Site Map.

Air Conformity Assessment Record of Non-Applicability

Record of Non-applicability of Conformity Rule (40 CFR Part 52, subpart W) for construction of two proposed hazardous waste and hazardous materials storage buildings at Los Angeles Air Force Base (LAAFB). One of these buildings will be located at Area B and the other at Fort MacArthur. Included in this project is the demolition of Building 78 at Fort MacArthur, as it will be replaced by the new building.

Project Title: Demolition of Building 78 and Construction of Two New Hazardous Materials and Hazardous Waste Storage Buildings, LAAFB, California.

Description of Proposed Action:

Proposed Action at LAAFB: Hazardous wastes at LAAFB are currently stored in temporary, portable facilities located adjacent to the Physical Fitness Center on the parking lot. The Proposed Action involves construction of a permanent building for storage of hazardous wastes/materials, to be located north of the Physical Fitness Center near the recently demolished Building 212. After the proposed new building is constructed, the current hazardous waste/material storage sheds will be removed to an off-site location and disposed of in a manner consistent with applicable regulations.

Proposed Action at Fort MacArthur: Existing Building 78 will be demolished, removed, and a new slightly larger building will be built in its place with the primary function of providing a safe, permanent storage area for hazardous wastes and materials. These wastes and materials are currently stored just outside (east) of Building 78 in temporary metal sheds. These sheds will be removed after the new building is constructed and disposed of in a manner consistent with applicable regulations.

Similar building plans and designs will be utilized for constructing the new buildings at Fort MacArthur and LAAFB. In addition to storing hazardous waste and materials, the buildings will also contain office space for two or three offices, non-hazardous waste and material storage, empty drum storage, a packaging area, equipment storage, restrooms, and a lunch room. Although the buildings were still in the design phase at the time this EA was prepared, the Air Force will design and construct the buildings in compliance with Air Force architectural and interior design standards and ensure compatibility with surrounding buildings. Some of the features of the buildings are listed below.

- Floor space: 2,500 square feet (this is slightly larger than the existing Building 78 at Fort MacArthur that will be replaced by this building).
- For subsurface construction work, the existing pavement at both sites will be cut up, removed, and replaced with a concrete foundation, with excavation to about 3 feet.
- Single story construction.
- Before demolition of Building 78, the building will be surveyed for asbestos, lead-based paint, and polychlorinated biphenyls (PCBs). If such materials are present, they will be properly removed using standard abatement and containment procedures.

Anticipated Date and Duration of Proposed Action: Construction of the proposed facilities would occur over a 6-month period in 2008, per the following schedule:

LAAFB:

- Construction Period of New Building: During 2008
- Construction Complete: By September 2008
- Removal of Old Storage Facilities: September 2008

Fort MacArthur:

- Demolition of Building 78: During 2007 - 2008
- Construction Period of New Building: During 2008
- Construction Complete: September 2008
- Removal of Old Storage Facilities: September 2008

Reason for Using Record of Non-Applicability: Conformity under the Clean Air Act, Section 176 has been evaluated for the above-described action per 40 CFR 51, and the requirements of the rule are not applicable because the direct and indirect emissions from the project have been estimated to be below *de minimis* thresholds. No change in long term, operational emissions is expected. The construction emissions from the Proposed Action will be far below the *de minimis* levels in the Conformity Rule (i.e., 100 tons per year for VOCs and 100 tons per year for NO_x). As a result, LAAFB is not required to prepare a full conformity determination for the Proposed Action. Emissions from Proposed Actions are “presumed to conform” based on emissions levels that are considered insignificant in the context of overall regional emissions.

Since potential air pollutant emissions associated with the proposed action meet both *de minimis* and regional significance criteria requirements, this federal action is exempt from further conformity requirements specified by the USEPA Final General Conformity Rule.

Supporting emissions documentation is provided below.

Emission Thresholds:

The General Conformity Rule is applicable to federal actions when the total direct and indirect emissions of the action either exceed the specified pollutant thresholds, known as *de minimis* thresholds, or create a significant impact on a regional basis. The *de minimis* emissions thresholds for the SoCAB area are presented in Table 1.

Table 1. – Applicable *De Minimis* Thresholds

	Nitrogen Dioxide (tons/year)	CO (tons/year)	PM ₁₀ (tons/year)
<i>De Minimis</i> Thresholds	100	100	70

If the *de minimis* thresholds are exceeded, then a conformity determination is required. However, if the emissions associated with the proposed actions do not exceed the *de minimis* thresholds and satisfy the exemption requirements provided in 40 CFR Part 93.153(c) and (d), then a conformity determination is not required.

To determine if the emissions are regionally significant, a comparison can be made to the South Coast Air Quality Management District (SCAQMD) has criteria. These criteria are presented in the SCAQMD's California Environmental Quality Act (CEQA) Air Quality Handbook, April 1993 (Table 1). Emissions criteria are presented below.

Table 2. South Coast Air Basin De Minimis Thresholds

Pollutant	Quarterly Threshold (tons)	Daily Threshold (pounds)
NO _x	2.5	100
CO	24.75	550
PM ₁₀	6.75	150

CO	=	carbon monoxide
NA	=	not applicable
N/A	=	not available
NO _x	=	nitrogen oxides
Pb	=	lead
PM _{2.5}	=	particulate matter equal to or less than 2.5 microns in diameter
PM ₁₀	=	particulate matter equal to or less than 10 microns in diameter
SO _x	=	sulfur oxides
VOC	=	volatile organic compound

Source: South Coast Air Quality Management District, 1993.

Emission Calculations:

Construction Emissions

Construction activities will produce some short-term emissions of regulated pollutants. However, these emissions will only occur during the construction period. These emissions will include particulate matter from fugitive dust and criteria pollutants from fuel-fired equipment. However, these emissions and related impacts will be temporary and less than significant in mass, concentration, and duration. Furthermore, because the number of vehicles and duration of construction required to perform the work is limited, emissions are not anticipated to cause an exceedence of NAAQS or CAAQS in the vicinity of the project. For subsurface construction work, the existing pavement at both sites will be cut up, removed, and replaced with a concrete foundation, with excavation to about 3 feet. There will be no soil import, no soil backfill activities, and no driving on unpaved roads, the type of activities that generate the largest amount of dust.

SCAQMD's Localized Significance Construction Scenarios emissions model was used to prepare rough estimates of construction emissions as presented in Tables 2 and 3. This scenario is based on the estimated scenario of what would occur at Fort MacArthur which is worst-case compared to LAAFB because there is building demolition involved at Fort MacArthur whereas there would not be at LAAFB. The totals for the various phases cannot be added together because they will occur at different periods, so one must compare only each individual construction phase to the impact thresholds to assess impact.

Table 3. Total Emissions Per Construction Phase (lb/day):

Construction Phase	CO	NO _x	PM ₁₀
Demolition	8.3	16.5	1.4
Site Preparation	8.0	19.9	1.6
Grading	13.6	34.0	2.1
Building	6.5	14.6	1.3
Arch Coating and Paving	8.8	17.6	1.5
Impact Thresholds	550	100	150

Emissions estimated using SCAQMD's Localized Significance Construction Scenarios emissions model, using the construction scenario assumptions listed in Section 2.3 of the EA.

Table 4. Total Annual Construction Emissions

Construction Phase	CO	NO _x	PM ₁₀
Demolition	82.7	165.1	14.3
Site Preparation	7.9	19.9	1.6
Grading	27.3	68.0	4.2
Building	392.7	878.2	75.0
Arch Coating and Paving	8.8	17.6	1.5
TOTALS (lb/year):	556	1251	100
TOTALS (ton/year):	0.3	0.6	0.1
De Minimis Thresholds	100	100	70

Emissions estimated using SCAQMD's Localized Significance Construction Scenarios emissions model, using the construction scenario assumptions listed in Section 2.3 of the EA.

As shown in Table 3, none of the daily emissions from the various construction phases exceed the regional impact thresholds. As shown on Table 4, none of the annual emissions exceed the federal Conformity *de minimis* thresholds. The model does not calculate VOC, SO_x, and lead, but it is expected that emissions of those pollutants will be at even lower levels than the pollutants presented due to the nature of the fuel and activities.

Operational Emissions

All chemicals stored in the buildings will be in sealed containers, so no emissions of chemicals will occur. Because the Proposed Action will not increase traffic, change traffic patterns, or change personnel, ongoing vehicle emissions from the project will not be affected. Implementing the Proposed Action will not change current or future air quality because there would be no new sources of air emissions and no increase in vehicle traffic. Therefore, there will be no operational air quality impacts associated with the Proposed Action.